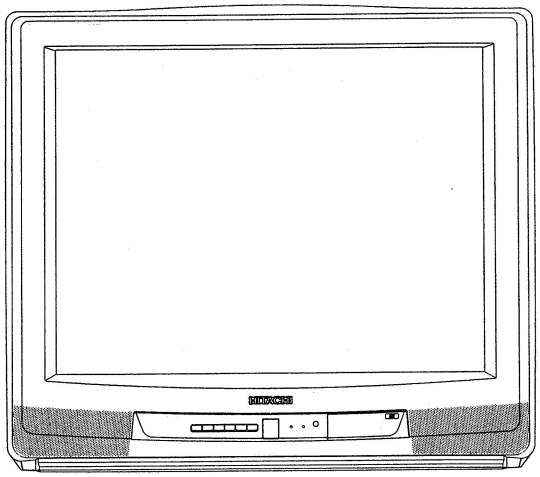
HITACHI

SERVICE MANUAL

PAL/SECAM/NTSC

YS	No. 0078E-C
C2980FS	- 041, 19*, 981
C2980PX	433, 941, 081M
C2999FS	051, 751, 081S

V1-2 Chassis



Addendum Service Manual

This addendum Service Manual consists of the following items.

1. Specifications 2
2. Circuit Diagrams 3-4
3. Comparison Part List 5

Except the differences in comparison part list (Pg5), all items of C2980FS Chassis are same as current C2978FS Models, therefore, use this addendum Service Manual together with issued Service Manual : C2978FS (YS 0067C-E). 3001

补充版

本补充版包含了以下内容

一) 技术参数 2
二) 电路图 3-4
三) 替换零件表 5

除上述内容外，其他内容与现在仍使用中的检修手册(C2978FS No. YS 0067C-E)相似。因此，检修本机种时，请对照使用上述检修手册。

因机器不断改良，所以技术参数和零件也会有变动

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

彩 色 电 视

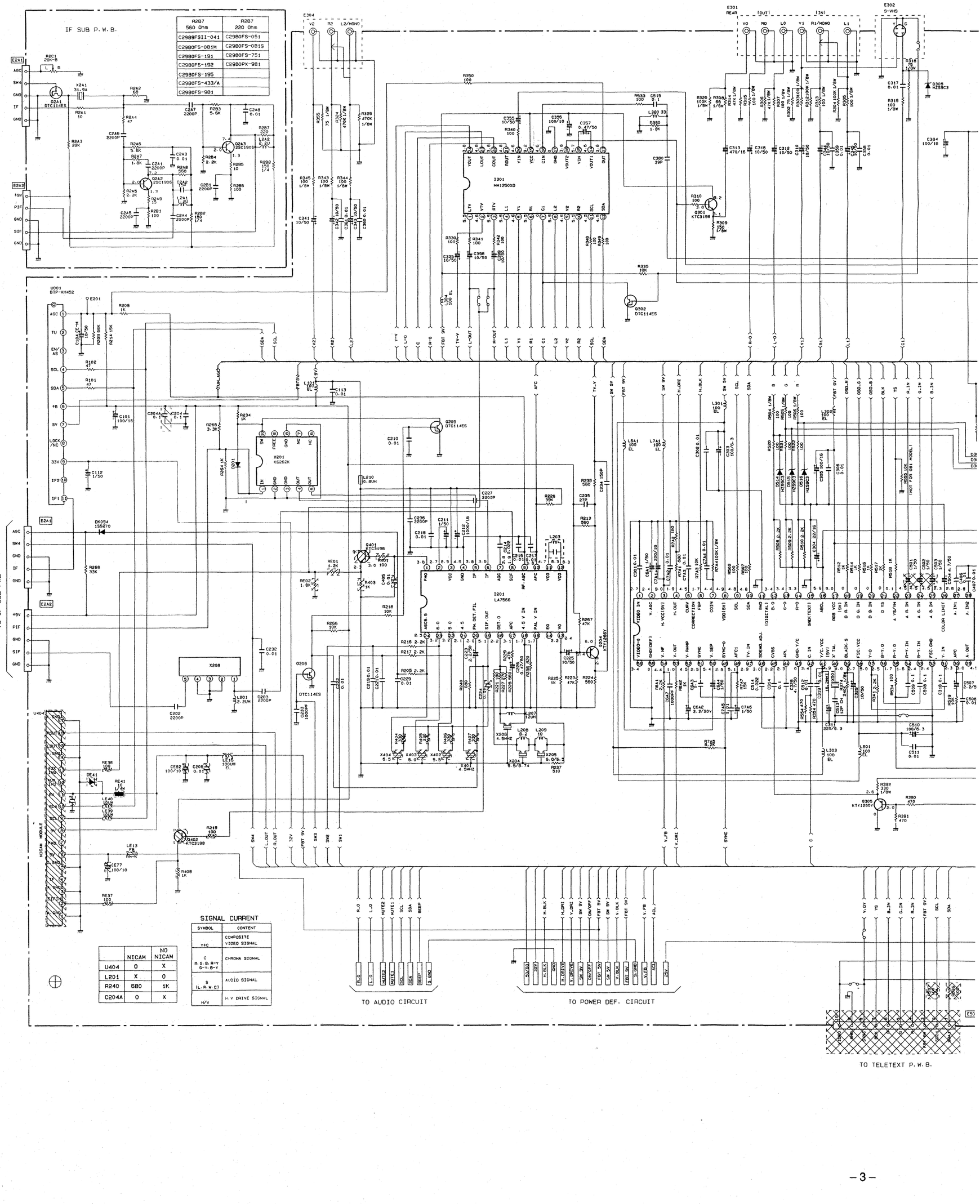
COLOR TELEVISION

Hitachi Consumer Products (S)

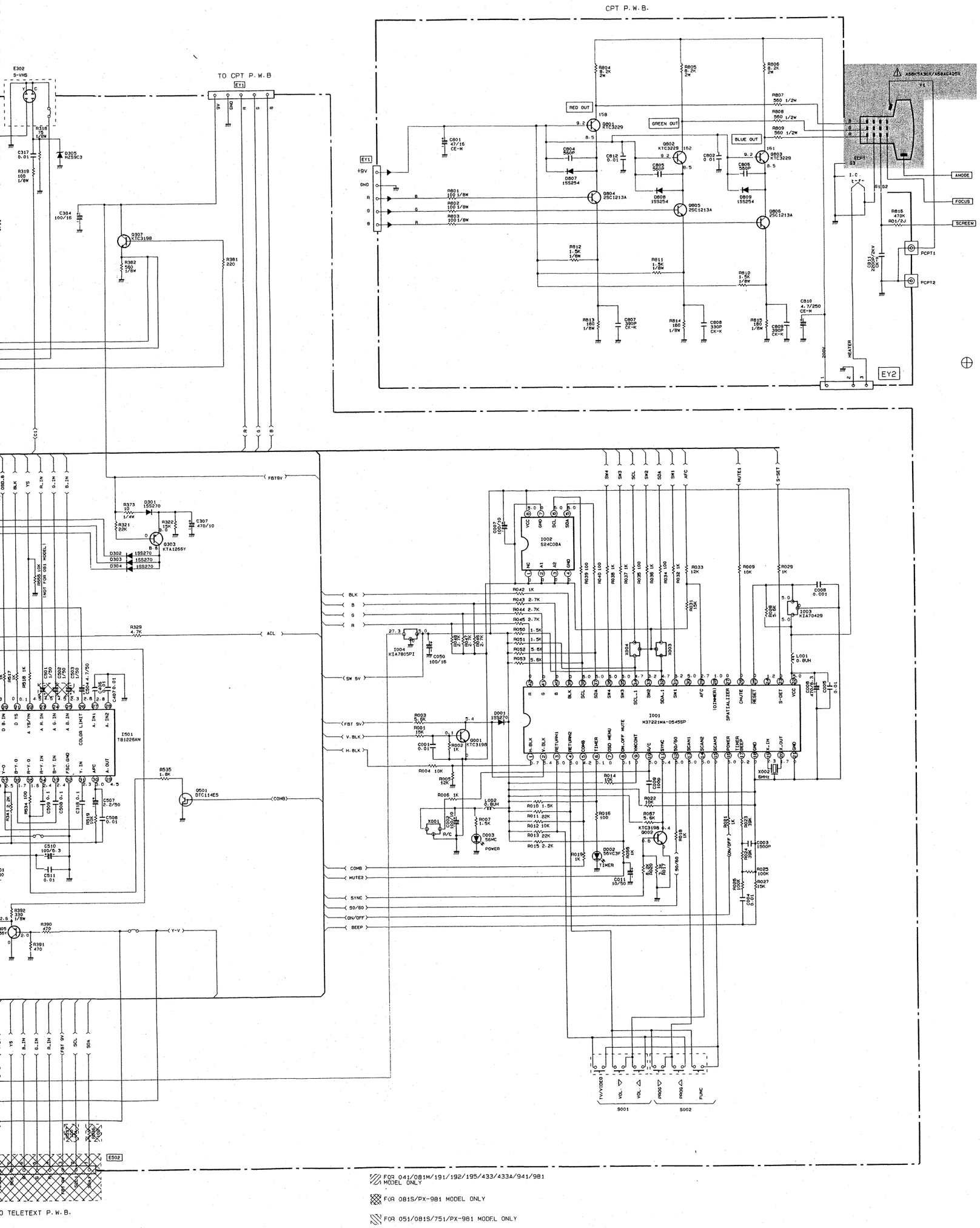
SPECIFICATIONS 规格

Power supply (电源供应)	PX-981, -98*, -192, -195	AC110V – 240V, 50Hz/60Hz (usable range: 100~264V)
	-04*, -08*	AC200V – 240V, 50Hz/60Hz
	-75*	AC240V, 50Hz
	-191	AC127V, 50Hz/60Hz (usable range: 100~264V)
	-05*, -43*, -94*	AC200V – 240V, 50Hz/60Hz (usable range: 100~264V)
Power consumption (耗电量)	-04*	112W (IEC Rated 148W)
	-19*, -43*, -94*, -98*	148W
	-05*, -75*	150W
	-08*, PX-981	152W
Reception system (接收制式)	625-lines	B.G/I/D.K/H PAL B/G/D.K/K1 SECAM NTSC50
	525-lines	M/NTSC NTSC3.58-5.5/6.0/6.5 NTSC4.43-5.5/6.0/6.5 SECAM60
Channel coverage (Frequency range: 44MHz ~ 863MHz) (频道范围)		CCIR:E2~12, E21~69, S01~3, S1~41 Japan: J1~12, J13~62 Hong Kong, UK: UK21~69 Australia: AU0~12, AU28~69 OIRT:R1~12, R21~69 USA: US2~13, J~W, US14~69 China: C1~12, C13~57, Z1~38
Aerial input（无线输入）		75Ω unbalanced type
Color picture tube（彩色显象管）		A68KSA30X/68QBC230X/A68AGA25X/A68AEG25X
Speaker（扬声器）		6 (cm) x 12 (cm) x 2
Sound output（声响输出）		7W x 2
Weight（重量）		38 kg
Dimension (W x H x D)（尺寸）		696 x 613 x 487 (mm)

Specifications may be subject to change without notice for improvement.
为了改进本机的性能，本机在规格上若有任何变更，恕不另行通知。


IF SUB P.W.B.
R2B7 560 Ohm
R2B7 220 Ohm
C2989FSII-041
C2980FS-051
C2980FS-081M
C2980FS-081S
C2980FS-191
C2980FS-751
C2980FS-192
C2980PX-981
C2980FS-195
C2980FS-433/A
C2980FS-981
E2A1
E2A2
E304
E301 REAR
E302 S-VHS
U001 BTP-AH452
I301 MM1250XD
I201 LA7566
X201 KS262K
X208
NICAM MODULE
TO IF SUB PWB
TO AUDIO CIRCUIT
TO POWER DEF. CIRCUIT
TO TELETEXT P.W.B.
SIGNAL CURRENT
SYMBOL
CONTENT
Y+C
COMPOSITE VIDEO SIGNAL
C R-Y, B-Y G-Y, B-Y
CHROMA SIGNAL
S (L, R, W, C)
AUDIO SIGNAL
H/V
H, V DRIVE SIGNAL
NICAM
NO NICAM
U404 0 X
L201 X 0
R240 680 1K
C204A 0 X

PRODUCT SAFETY NOTE : Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- Since this is basic circuit diagram, the value of the parts is subject to be altered for improvement
- All DC voltage to be measured with a teser (100kΩ/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

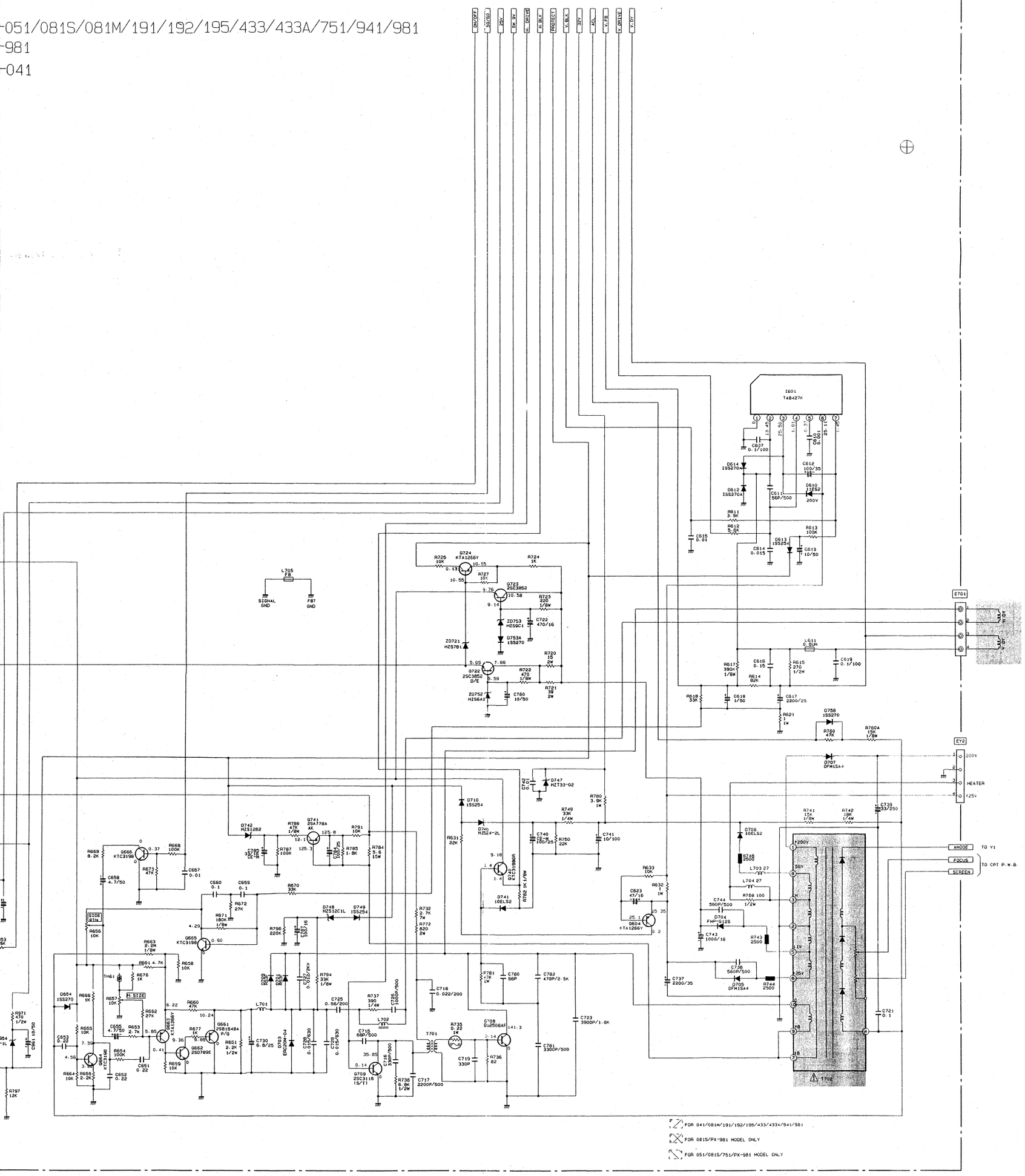
C2980FS-051/081S/081M/191/192/195/43
C2980PX-981
C2999FS-041

AUDIO CIRCUIT

POWER CIRCUIT

PRODUCT SAFETY NOTE : Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

-051/081S/081M/191/192/195/433/433A/751/941/981
-981
-041



- Since this is basic circuit diagram, the value of the parts is subject to be altered for improvement
- All DC voltage to be measured with a teser (100k Ω/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

COMPARISON PART LIST

The main differences between C2978FS Chassis and C2980FS Chassis are as below.
Service man please refer to Service Manual No 0067C-E for detail Replacement Part List.

ABBREVIATIONS Capacitors .....CD: Ceramic Disk, PF: Polyester Film, EL: Electrolytic, PP:Polypropylene, PR: Paper, TA: Tantalum, TM: Trimer.
Resistors .....CF: Carbon Film, WW: Wire Wound, FR: Fuse Resistor, MG:Metal Glazed, VR: Variable Resistor, MF: Metal Oxide Film.
Semiconductors.....TR: Transistor, DI: Diode, ZD: Zener Diode, VA: Varistor, TH: Thermistor.

C2978FS Chassis			C2980FS Chassis		
SYMBOL NO.	PART NO.	DESCRIPTIONS	SYMBOL NO.	PART NO	DESCRIPTIONS
⚠ C998	AJ00182F	CD 1000PF +80%-20% 250V	⚠ C998	AJ00601	CD 1000PF +80%-20% 250V
⚠ C999	AJ00184F	CD 2200PF +80%-20% 250V	⚠ C999	AJ00603	CD 2200PF +80%-20% 250V
C426	0800005R	EL 2.2MF 50V(SME)	C426	0284638R	EL 10MF 16V(BP)
C435	0800005R	EL 2.2MF 50V(SME)	C435	0284638R	EL 10MF 16V(BP)
CA59	----------NIL----------		CA59	0800294R	EL 10MF 50V(SMG)
CA60	----------NIL----------		CA60	0800294R	EL 10MF 50V(SMG)
SP401	GM00321	Speaker Box	SP401	GK00511	Speaker
SP402	GM00321	Speaker Box	SP402	GK00511	Speaker
I003	CZ00461R	IC BMR-4201FT(RAD)	I003	CP02871R	IC KIA7042P
Q001	2327773M	TRS 2SC3414 C/D	Q001	CF01421R	TRS KTC3198GR
Q002	2327773M	TRS 2SC3414 C/D	Q002	CF01421R	TRS KTC3198GR
Q204	2327752M	TRS 2SA1390 B/C	Q204	CF01431R	TRS KTA1266Y
Q301	2327773M	TRS 2SC3414 C/D	Q301	CF01421R	TRS KTC3198GR
Q303	2327752M	TRS 2SA1390 B/C	Q303	CF01431R	TRS KTA1266Y
Q305	2327753M	TRS 2SA1390 C/D	Q305	CF01431R	TRS KTA1266Y
Q307	2327773M	TRS 2SC3414 C/D	Q307	CF01421R	TRS KTC3198GR
Q402	2327773M	TRS 2SC3414 C/D	Q402	CF01421R	TRS KTC3198GR
Q408	2327753M	TRS 2SA1390 C/D	Q408	CF01431R	TRS KTA1266Y
Q409	2327773M	TRS 2SC3414 C/D	Q409	CF01421R	TRS KTC3198GR
Q410	2327773M	TRS 2SC3414 C/D	Q410	CF01421R	TRS KTC3198GR
Q663	2327753M	TRS 2SA1390 C/D	Q663	CF01431R	TRS KTA1266Y
Q664	2327773M	TRS 2SC3414 C/D	Q664	CF01421R	TRS KTC3198GR
Q665	2327773M	TRS 2SC3414 C/D	Q665	CF01421R	TRS KTC3198GR
Q666	2327773M	TRS 2SC3414 C/D	Q666	CF01421R	TRS KTC3198GR
R489	0700034M	CF 330 OHM +-5% 1/16W	R489	----------NIL----------	
R496	0700034M	CF 330 OHM +-5% 1/16W	R496	----------NIL----------	
RA56	----------NIL----------		RA56	0700047M	CF 3.3K OHM +-5% 1/16W
RA57	----------NIL----------		RA57	0700047M	CF 3.3K OHM +-5% 1/16W
RA58	----------NIL----------		RA58	0700053M	CF 8.2K OHM +-5% 1/16W
RA59	----------NIL----------		RA59	0700053M	CF 8.2K OHM +-5% 1/16W

HITACHI

SERVICE MANUAL

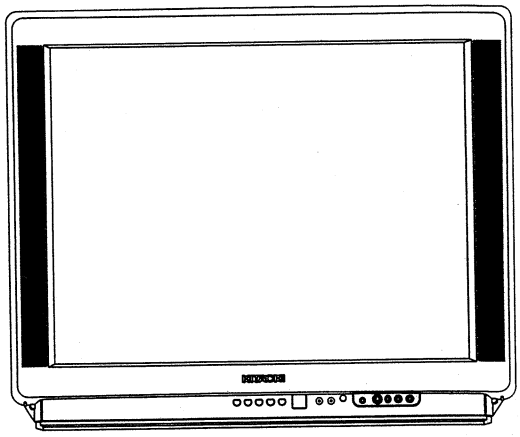
PAL/SECAM/NTSC

YS | No. 0067C-E

CMT2978 - 041/051/751/
C2989FS 081S/981/PX-981/
C2978FS 191/192/433

V1 Chassis

HITA -03001



注　　意: 开始检修电视机机芯以前，检修人员必须阅读这本检修手册中“有关安全上的预防事项”及“制品安全上的注意”两节。

CAUTION: Before servicing this chassis, it is important that the service technician reads the “Safety Precaution” and “Product Safety Notices” in this Service Manual.

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SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

COLOR TELEVISION

November 1997　　**Hitachi Consumer Products (S)**

3001

TECHNICAL CAUTIONS

SAFETY PRECAUTIONS

WARNING: Since the chassis of this receiver is connected to one side of the Mains Supply during operation, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of equipment. The following precautions should be observed.

1. Do not install, remove, or handle the picture tube in any manner unless shatter-proof goggles are worn. People not so equipped should be kept away while picture tubes are handled. Keep picture tube away from the body while handing.
2. When replacing chassis in the cabinet, all the protective devices are put back in place, such as; barriers, non-metallic knobs, adjustment and compartment cover or shields, isolation resistors-capacitors, etc.
3. When service is required, observe the original lead dress. Extra care should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacturer's replacement component. Especially critical components as indicated on the circuit diagram should not be replaced by other makes. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced receiver to the customer, the service technician must thoroughtly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the instrument by the manufacturer has became defective, or inadvertenly defeated during servicing. Therefore, the following checks are recommended for the continued protection of the customers and service technicians.

INSULATION

Insulation resistance between the mains poles and any accessible metal parts should not be less than 7MΩ at 500V DC. Also, no flashover or breakdown should occur during the dielectric strength test, to apply 4KV AC for one minute between the mains poles and any accessible metal parts.

X-RADIATION

TUBES: The primary source of X radiation in this receiver is the picture tube. The tube utilized in this chassis is specially constructed to limit X radiation.
For continued X radiation protection, the replacement tube must be the same type as the original, HITACHI approved type.

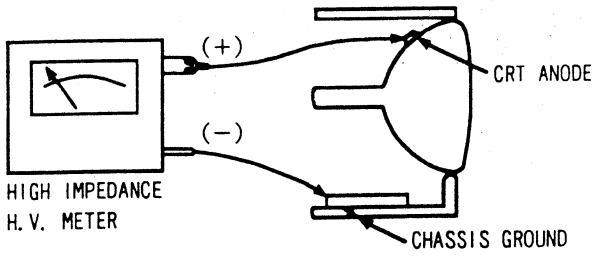
High Voltage

This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit is operated correctly.

Serviceman Warning

With minimum Black Level and Picture, the operating high voltage in this receiver is lower than 31.0K. In case any component having influence on the high voltage is replaced, confirm that high voltage with minimum Brightness and contrast is lower than 33.0kV. To measure H. V. use a high impedance H. V. meter. Connect (-) to chassis earth and (+) to the CRT anode button. (See the following connection diagram).

NOTE: Turn the power switch off without fail before the connection to the Anode button is made.



PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receiver have special safety related characteristics. These characteristics are often not evident from visual inspection nor can be protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ mark in the schematics and on the replacement parts list in this Service Manual. The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement one shown in the parts list in this Service Manual, may create electrical shock, fire, X radiation, or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of, HITACHI Service Manual may be obtained at a nominal charge from your HITACHI sales offices.

TECHNICAL CAUTIONS

High voltage limiter circuit operation check

1. Connect the high voltage voltmeter between the CPT anode (anode cap) and GND (CPT grounding lead).
2. Receive the broadcast signal and set the brightness and contrast VRs to max. Set the beam current to 1.5mA±10%.

(After cut-off adjustment)

3. Set the AC input voltage to 220±3V.
4. Check that the constant high voltage is 28.5±1.0kV at this time.
5. Turn the switch of the set to off and connect the jig shown in Fig.3 at both ends of R964 as shown in Fig.1.
6. With the brightness and contrast VRs left as set in item.2 and with the AC input voltage stabilized at 220V, turn the picture disappears with a high voltage of 36.0kV or less.
7. Turn the switch of the set to off immediately after the check is completed.
8. Remove the adjust jigs and high voltage voltmeter.

NOTE: When connecting disconnecting the high voltage voltmeter to from the anode cap, be sure to turn the switch of the set off and do it after the residual high voltage is discharged to the chassis because the high voltage may remain at the anode cap.

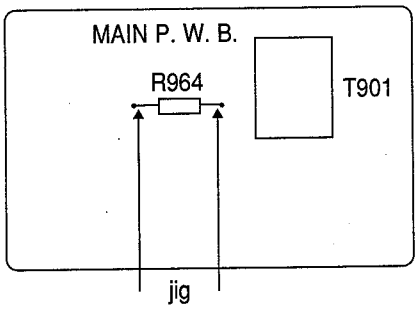


Fig. 1

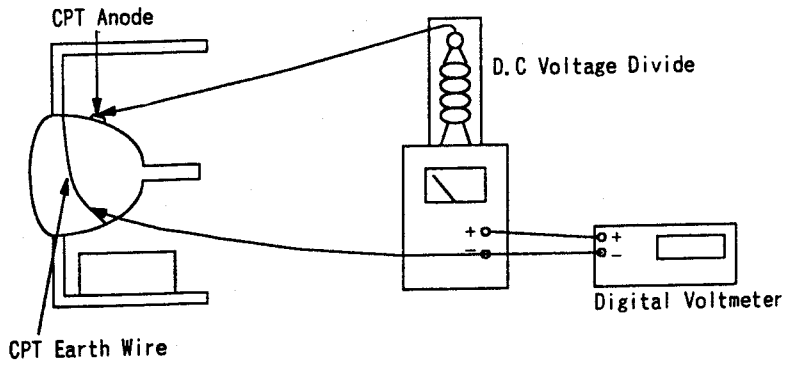


Fig. 2

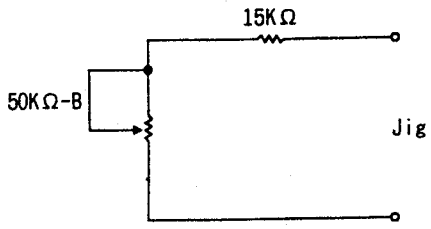


Fig. 3

有关安全上的预防事项

警告: 因为在动作期间，这电视机的底盘与电源的一端互相连接，所以对检修这类型号的机器所必须的预防措施为下熟悉的人，不应该企图修机器。要检修必须遵守下列预防事项。

1. 要装入，取出或外理显象管时，必须带上防碎玻璃做的护目镜。外理显象管时，不带这护目镜的人不可接近。显象管应放在离开人体的地方。
2. 将底盘装入机箱里面时，所有的保护装置，如隔板，非金属的调整钮，小室盖子或小室屏蔽，隔离用电阻，电容器等，也应该装回去。
3. 开始检修之前，应该注意原来的引线包层。尤其是在高压电路部分需要特别小心，必须认清正确的引线包层。
4. 要检修，请一定要使用制造厂所指定的替换用机件。尤其在电路上注明几个特别重要的机件，要替换这些机件绝不可使用其他厂家的制品。当电路发生短路时，凡是有过热痕迹的机件都需要全部交换。
5. 将修好的电视机送回顾客以前，检修人员应该彻底检验机器以保证它完全安全，绝没有电击的危险，并确实检查机器内部的各种保护装置，以保证这些部分没有因检修而失灵。

由于上面理由，检修人员最好实行以下各项检查，以保证顾客和自己的安全。

绝缘

电源电极与任何可触及的金属部分之间的绝缘电阻不可小于7兆欧姆（加上直流500伏电压时）。而且，在电源电极与任何可触及的金属部分之间加上4千伏的交流电压（1分钟）而试验其绝缘强度时，不可发生闪络或绝缘击穿等现象。

X射线

显象管: 这部电视机所产生的X射线，其主要的来源是显象管。所以这部电视机所使用的显象管有特别的构造设计，使X射线尽量减少。为了能继续防止X射线起见，要交换显象管时，请一定要使用相同型号的日立显象管。

高压

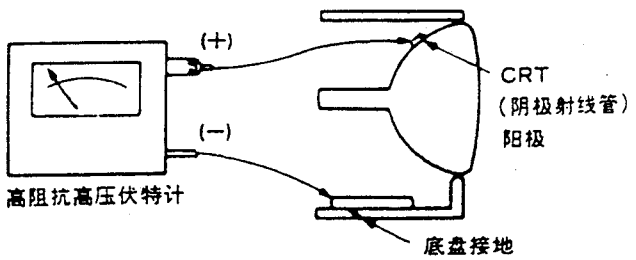
这电视机装有一个高压限制电路，可清楚地表示电压升高已超过额定值。进行维修服务时，请根据本维修说明书有关此高压限制电路的所有注解说明去做，则高压限制电路便可以正确地操作。

维修人员须注意

这电视机在最小黑色电平和图象电流时的高电压是在31.0kV以下的。若更换了会影响高压的部件时，一定请确认在最小亮度和对比度状况下的高电压是否低于33.0kV.

请使用高阻抗高压伏特计，令其（－）连接底盘接地线，令（＋）连接CRT（阴极射线管）阳极电钮，去测量高电压（H.V.）。（参考下面的连接图）。

注: 当要连接到阳极电钮以前，一定要先把电源开关关掉。



有关制品安全上的注意事项

日立电视机所使用的许多机件具有有关安全的特别性能。这种特别性能在表面上往往看不出来，而且即使使用额定电压或功率更大的其他替换用机件，也不一定可得到这些日立机件所保证的保护性能。在这本检修手册里面有指定

这些具有特别安全特性的替换用机间。在这本检修手册的简图和替换用机件表上附带⚠记号的机件，就表示具备这种特别的安全特性。

如果不使用这本检修手册机件表上HITACHI所推荐的替换用机件而使用没有同样安全特性的其他替换用机件的话，就可能会发生电击，失火，X射线等事故。

HITACHI对制品安全不断努力改进，经常发出新的技术指令。如需要新的技术情报就请参看最新的HITACHI检修手册。可向HITACHI销售公司预订或订阅“日立检修手册”，只收取极少费用。

技术上须注意事项

高压限压器电路操作检查

1. 把高压伏特计连接在CPT阳极（阳极罩）和GND（CPT的接地线）之间。

2. 试接收一个电台的广播信号，且把亮度和对比度的VRs（可变电阻器）调到最大。把射束电流调为1.5mA ± 10%（切断调整之后）

3. 把AC电的输入电压调为220±3V。

4. 此时，检查恒定高压是否呈 28.5 ± 1.0kV。

5. 把设定开关关掉，然后把图3所示的夹具接在图1所示的R964的两端。

6. 以第2项所设定的亮度和对比度VRs，AC电流输入电压并保持稳定的220V状况下调节50kΩ可变电阻器以使影像消失掉，高压不可超过 36.0kV。

7. 检查完毕后，请立即关掉设定开关。

8. 卸下调整夹具和高压伏特计。

注：当把高压伏特计连接到阳极罩拆下时，必须先关掉设定开关,并且等残留高压电流都往底盘放电完毕之后，才进行接拆工作。因为阳极罩上在关掉设定开关后，还可能残留有高压电流。

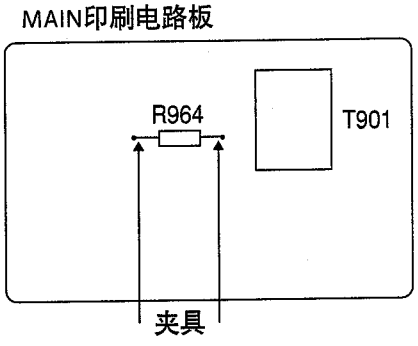


图 1

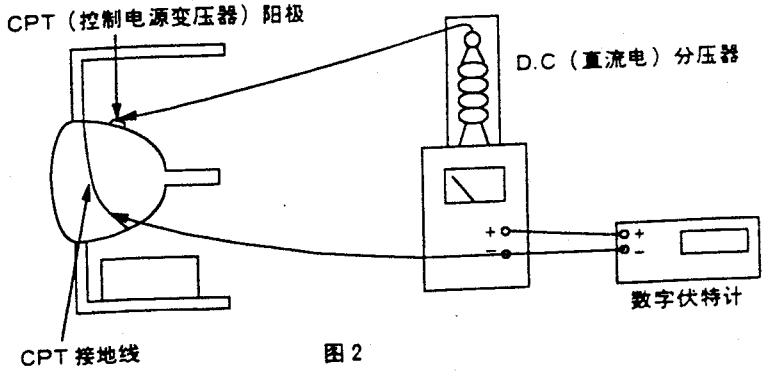


图 2

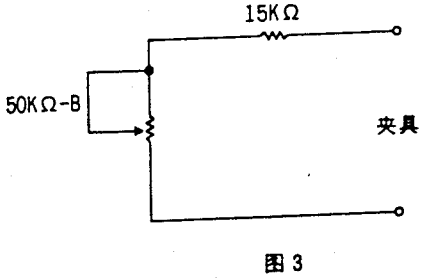


图 3

SPECIFICATIONS

Reception system	625-LINES B.G/I/D.K/H PAL B.G/D.K/K1 SECAM NTSC50 525-LINES M/NTSC NTSC3.58-5.5/6.0/6.5 NTSC4.43-5.5/6.0/6.5 PAL 60	Antenna input	75 Ω COAXIAL IEC TYPE
		Colour picture tube	A68KSA30X / A68AGA25X / A68AEG25X
		Speaker (cm)	Ø10 (x2)
		Sound output	7W x 2
(Channel coverage Frequencey range 44MHz-863MHz)	CCIR : E2~12, E21~69, S01~3, S1~41 Australia : AU0~12, AU28~69 OIRT : R1~12, R21~69 JAPAN : J1~12, J13~62 U.S.A. : US2~13, J~W, US14~69 Hong Kong, U.K. : UK21~69 China : C1~12, C13~57, Z1~38	Power supply	041 : AC 200V-240V 50Hz/60Hz 981, 192 : AC 110V-240V 50Hz/60Hz 081S, 051, 433 : AC 200V-240V 50Hz/60Hz 751 : AC 240V 50Hz 191 : AC 127V 50Hz/60Hz
		Power consumption	041 : 112W(IEC Rated 148W) 191, 192, 981, 433 : 148W 051, 751 : 150W 081S : 152W
		Weight (kg)	40kg
		Dimensions W x H x D (mm)	679 x 566 x 484

※ Specifications are subject to change wihout notice to improve performance.

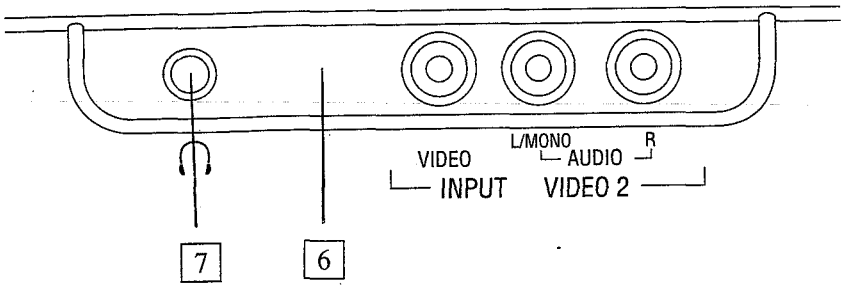
技 术 参 数

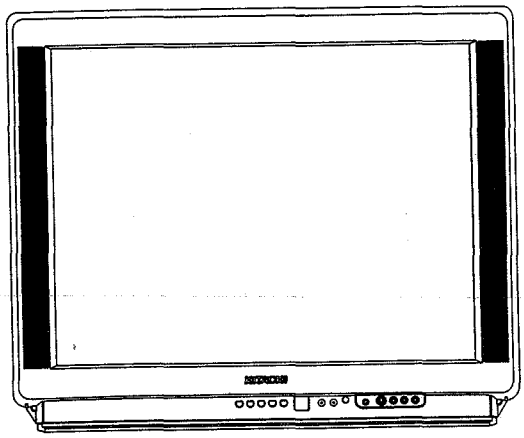
接收方式	625条 B.G/I/D.K/H PAL B.G/D.K/K1 SECAM NTSC50 525条 M/NTSC NTSC3.58-5.5/6.0/6.5 NTSC4.43-5.5/6.0/6.5 PAL 60	无线输入	75欧姆同轴IEC型
		显象管	A68KSA30X / A68AGA25X / A68AEG25X
		扬声器（cm）	Ø10 (x2)
		扬音输出（最大）	7W x 2
频道范围 频道范围 44兆赫 ~ 863兆赫	CCIR : E2 ~ 12, E21 ~ 69, S01 ~ 3 S1 ~ 41 澳洲 : AU0 ~ 12, AU8 ~ 69 OIRT : R1 ~ 12, R21 ~ 69 日本 : J1 ~ 12, J13 ~ 62 美国 : US2 ~ 13, J ~ W, US14 ~ 69 香港，英国 : UK21 ~ 69 中国 : C1 ~ 12, C13 ~ 57, Z1 ~ 38	电力消耗	041 : AC 200V-240V 50Hz/60Hz 981, 192 : AC 110V-240V 50Hz/60Hz 081S, 051, 433 : AC 200V-240V 50Hz/60Hz 751 : AC 240V 50Hz 191 : AC 127V 50Hz/60Hz
		电源	041 : 112瓦(IEC额定148瓦) 191, 192, 981, 433 : 148瓦 051, 751 : 150瓦 081S : 152瓦
		重量（公斤）	40kg
		外型尺寸（mm） （宽 x 高 x 深）	679 x 566 x 484

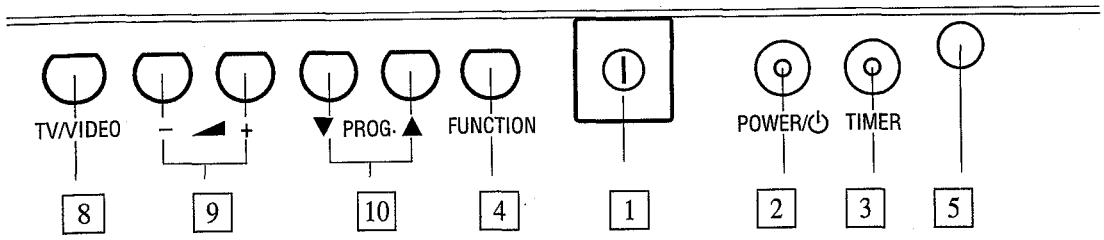
※ 上述各项参数有变更或改良时，恕不另行通知。

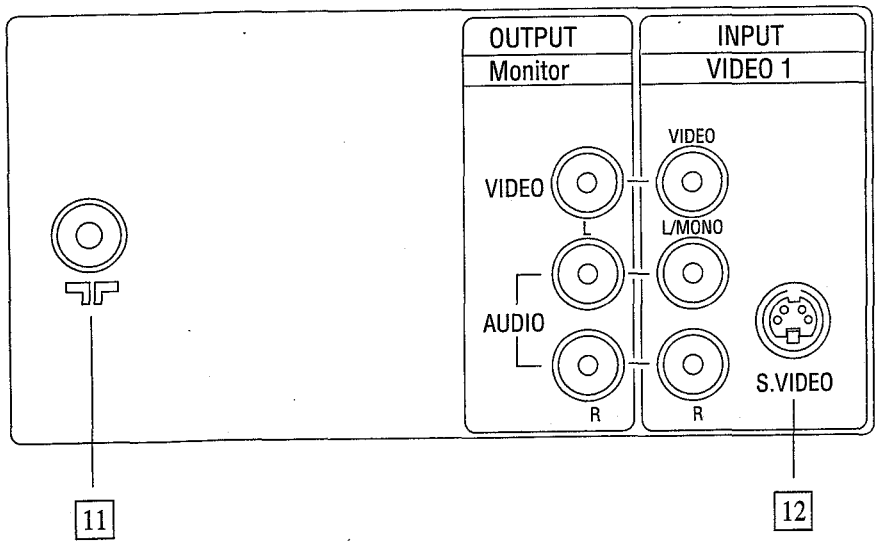
CONTROL
（各种调整控制机件）

Front Panel
电视机的前面板





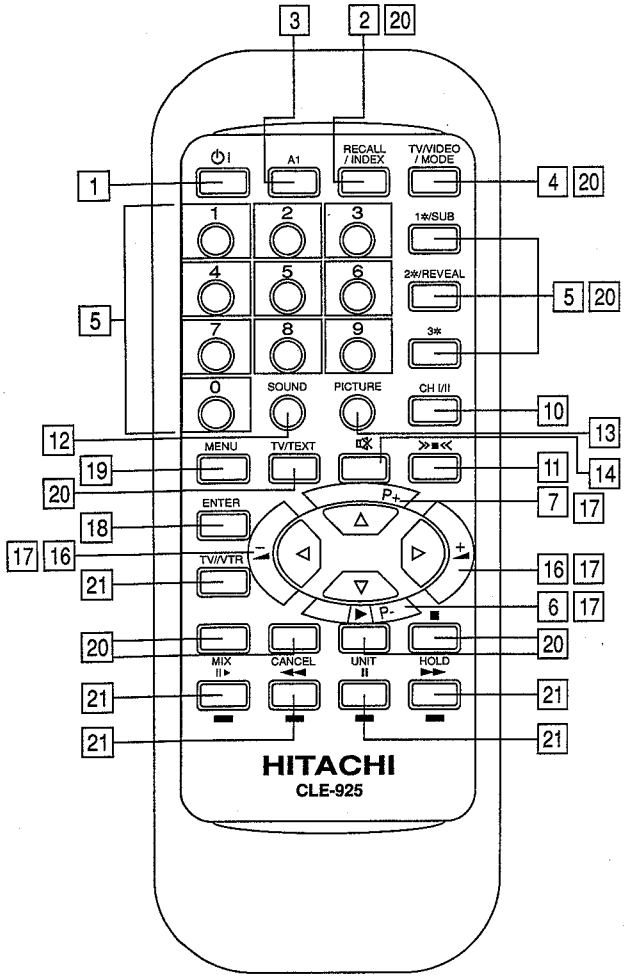




Rear Panel
电视机的后面板

1	POWER ON/OFF SWITCH 电源开关
2	POWER STANDBY INDICATOR 电源/等待指示灯
3	TIMER INDICATOR 定时指示灯
4	FUNCTION 功能键
5	REMOTE CONTORL RECEIVER 遥控接收部
6	INPUT 2 INPUT TERMINAL INPUT 2 输入端子
7	HEADPHONE JACK 耳机插座
8	INPUT SELECT 输入选择
9	VOLUME UP/DOWN 音量升/降
10	PROGRAMME UP/DOWN 节目升/降
11	ARIAL TERMINAL 天线端子
12	AV IN/OUT TERMINALS AV 输入/输出端子

REMOTE CONTROL UNIT
(遥控发射器上之控制机件)



1	POWER ON/OFF SWITCH 电源开关
2	RECALL 召回
3	AI (For other models) 电脑控制（适用于其他型号）
4	INPUT SELECTION 输入选择
5	PROGRAMME SELECTOR 节目选择
6	PROGRAMME DOWN 节目降
7	PROGRAMME UP 节目升
10	CH I/CH II (051/751/081S/PX-981 only) CH I/CH II (051/751/081S/PX-981 适用)
11	SPATIALIZER (For other models) 环绕声（适用于其他型号）
12	SOUND 声音
13	PICTURE 图像
14	MUTE 静噪
16	VOLUME UP/DOWN 音量升/降
17	CURSOR 光标
18	ENTER 决定
19	MENU 菜单
20	TELETEXT OPERATING KEYS (081S/PX-981 only) 图文电视（081S/PX-981 适用）
21	VTR OPERATING KEYS (For other models) 录象机专用钮（适用于其他型号）

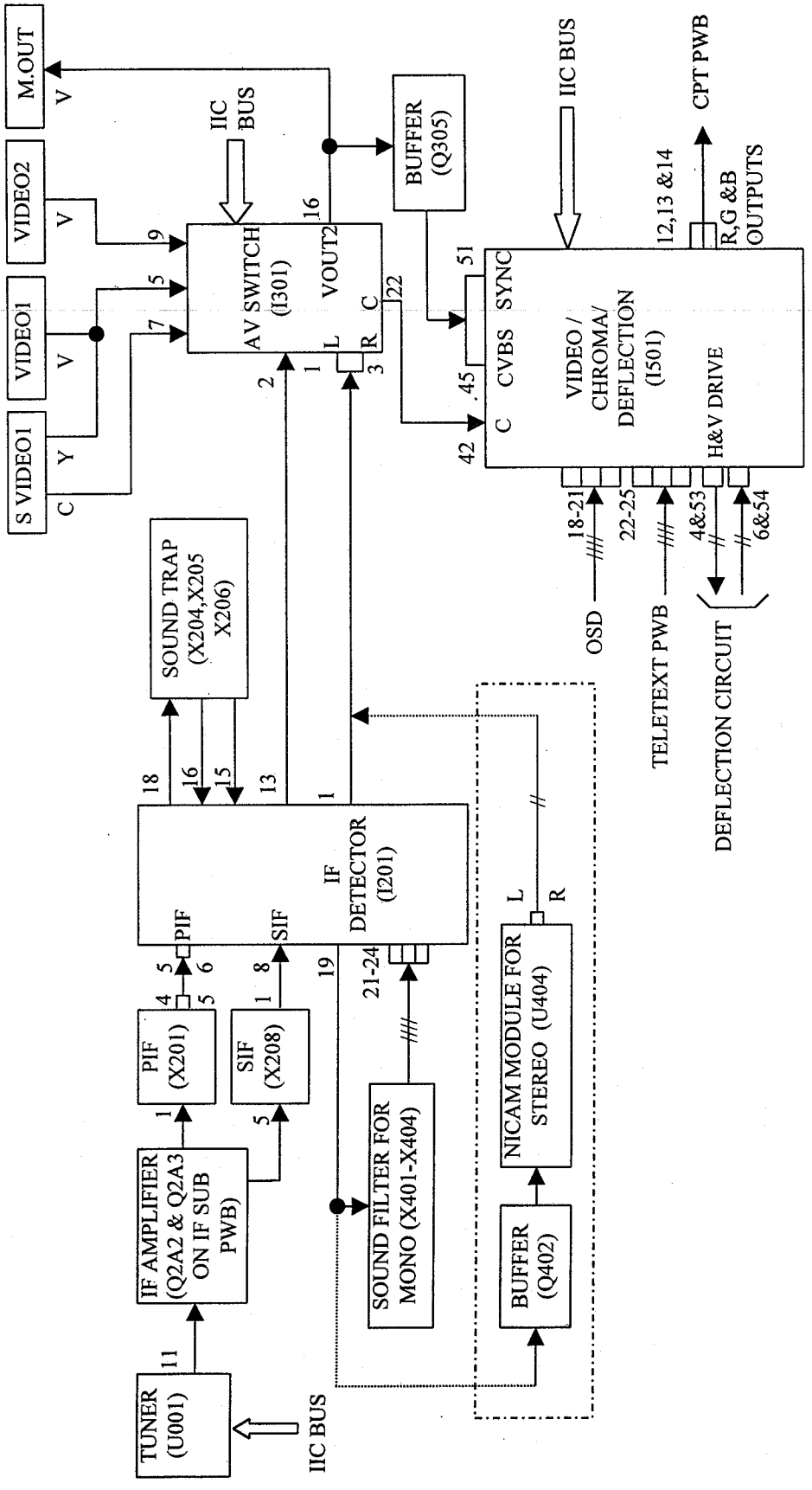
CIRCUIT DESCRIPTION
(电路说明)

Selection and CPU circuitry

IC type, M37221MA, performs functions like IIC controls, channel selection, on-screen displays, search tuning, systems selection amongst others. The pin functions of M37221MA is presented in table form as shown below :

PIN NO.	NAME	I/O	FUNCTION
1	H.BLK	Input	Horizontal synchronous signal i/p pin for OSD
2	V.BLK	Input	Vertical synchronous signal i/p pin for OSD
3	RETURN1	Input	Return signal of front panel matrix
4	RETURN2	Input	Return signal of front panel matrix
5	COMB	Output	Output for NTSC and VIDEO signal
6	TIMER	Output	Output for timer LED. H : timer set, L : normal
7	N.C.		
8	ON_OFF MUTE	Output	Mute control during power on/off
9	V.M Cont.	Output	Velocity Modulation control on/off
10	R/C	Intput	Remocon serial data i/p from receiver unit
11	SYNC	Input	Horizontal signal i/p. Used to detect presence of RF signal after A/D conversion
12	50/60	Output	Forced output to control frequency of receiving picture
13	SCAN1	Output	Output signal at front panel to control program up/down
14	SCAN2	Output	Output signal at front panel to control volume up/down
15	SCAN3	Output	Output signal at front panel to control Function & TV/VIDEO keys
16	POWER	Output	Power ON/OFF control. H: ON, L : OFF
17	BEEP	Output	BEEP sound o/p. L:off, PWM 50% duty cycle : ON
18	GND		
19	X.IN	Input	Clock in
20	X.OUT	Output	Clock out
21	GND		
22	Vcc		
23	S-DET	Input	S VIDEO input detect.
24	N.C.		
25	RESET	Input	Resets MCU via RESET IC, I003. H: normal, L : RESET
26	CH.MUTE	Output	Mute control during channel change
27	SPATIALIZER	Output	Spatializer control o/p
28	N.C.		
29	AFC	Input	AFC voltage i/p. Used together with SYNC to detect presence of RF signal after A/D conversion
30	N.C.		
31	SW1	Output	Select main signal system
32	SDA_1	I/O	IIC data i/o
33	SW2	Output	Select main signal system
34	SCL_1	I/O	IIC clock select
35	SW3	Output	Select main signal system
36	SW4	Output	Select main signal system
37	SDA	I/O	IIC data i/o for EEPROM
38	SCL	I/O	IIC clock select for EEPROM
39	BLK	Output	OSD blanking output signal
40	B	Output	Blue output for OSD
41	G	Output	Green output for OSD
42	R	Output	Red output for OSD

BLOCK DIAGRAM FOR SIGNAL CIRCUIT



TUNER AND IF CIRCUIT

The tuner(U001) used on this chassis is powered by the 9V supply, it is IIC Bus controlled and covers VHF, UHF and CATV Band(Mid, Supper and Hyper).
The IF circuit consists of SAW X201, SAW X208, Q2A2, Q2A3 and I201(LA7566).
The IF output from tuner(pin 11 of U001) is applied to amplifiers Q2A2 for PIF and Q2A3 for SIF(both amplifiers are on IF Sub PWB) through E2A1 connector. Outputs of amplifiers return through E2A2 and connected to SAW filter X201(PIF) and X208(SIF). At the input of X201(PIF), Q205 serves to select the systems between(B/G,I, D/K) or (M).
After that, demodulation and sound systems selection are made at I201(LA7566).
For mono sound system, the output of I201 at pin 19 is sent out a series of bandpass filters to select required sound system(B/G, I,D/K or M). The selected signal(pin 21 or 22 or 23 or 24) is then demodulated in I201. The sound output is given at pin 1.
For stereo sound system, the output of pin 19 is sent to buffer amplifier(Q402) and output is then connected to NICAM MODULE(U404) where sound system selection and demodulation are made.
At I201, sound systems selection are as follow :

	B/G	I	D/K	M
I201 pin 22	H	H	L	L
I201 pin 23	H	L	H	L
Q205 Base	L	L	L	H

SIF signal is removed by using sound trap filters(X204, X205 and X206) and giving B/G, I, D/K video signal at pin 15 and M video signal at pin 16.
Those video signals are switched internally and give output at pin 13 of I201.

VIDEO/CHROMA

Composite video signals from RF, Video 1 and Video 2 entered I301 via pin 2, 5 and 9 respectively. However, S Video 1 send Y and C signals separately to I301 via pin 7 and pin 5. The same pin(pin 5) is used for Y signal with S Video 1 and V signal with Video 1.
At I301, which input signals(RF, S Video 1, Video 1 or Video 2) to be proceeded are selected and then, transferred to I501 via pin 16. These selection procedures are controlled by IIC Bus.
If one of the signal(RF, Video 1 or Video 2) is selected at I301, I501(TB1226AN) will receive composite video signal at pin 45, 42 and 51. Y/C separation is performed internally.
If the signal selected at I301 is S Video 1, I501 will receive C signal at pin 42 and Y signal at pin 45 and 51. Therefore, Y/C separation is not required.

IC	I301						I501		
I/O	Input				Output		Input		
Pin no.	2	5	7	9	16	22	45	42	51
RF	V	-	-	-	V	V	V	V	V
Video 1	-	V	-	-	V	V	V	V	V
Video 2	-	-	-	V	V	V	V	V	V
S Video 1	-	-	Y	-	Y	C	Y	C	Y

V = Composite Video Signal
Y = Luminance Signal
C = Chroma Signal

I501(TB1226AN) which incorporates VIDEO/ CHROMA/DEFLECTION is used to perform auto color identification of PAL/SECAM/ NTSC,sync separation, AFC, H/V oscillator and output stage RGB signals etc... IIC Bus has controlled over this I501 i.e. Brightness, Contract, Color, Sharpness and Tint can be changed.
For all systems(PAL/SECAM and NTSC), Y and C are separated by using bandpass and trap method, which can change each center frequency internally in I501. And also in I501, color identification and decoding are performed with internal 1HDL and x'tal 16.2 MHZ at pin 40 instead of conventional 4.43 MHZ for PAL/SECAM and 3.58 MHZ for NTSC x'tal. After that, the result R, G, B signals are then combined with OSD R,G,B signals from pin 18~20 and T/Text R,G,B signals from pin 23~25 by switching operation at pin 21(D YS), pin 22(A YS).
The outputs are finally emerged from pin 12 ~14 as the R, G and B. Then, R, G and B output signals are sent to CRT PWB.
Internal sync separator and H/V oscillator of I501 produce H drive and V drive signals which are sent to Deflection circuit for processing of Horizontal and Vertical scanning.

HORIZONTAL DEFLECTION

This circuit used the horizontal deflection yoke(H. DY) to deflect the electron beam of the CRT horizontally. It also generates high-voltage and medium/low voltage power supplies through FBT.
At pin 51 of I501, the composite video signal from Q305 is applied to the internal sync. separator and phase detector/correction of I501, the resulted horizontal drive pulse is output from pin 4 of I501.
The horizontal drive pulse is supplied to the horizontal drive circuit consisted of Q708, Q709 and T701.
At the horizontal output tansistor Q708, it generate a FBT pulse of approximately 1100V at the collector and also cause sawtooth current to flow to the H. DY, thus deflecting the electon beam in the CRT horizontally.
This FBT pulse also causes a high voltage (H. V) and medium/low voltages(i.e 200V, 56V, 11V, 25V) to be generated at the secondary circuit of the FBT T702.
The pincushion distortion correction circuit in this chassis is to increase the H. DY current to correct the pincushion distortion at both sides of screen. The verticall sawtooth wave of the V. DY is input to Q665 and output as a parabolic wave. This parabolic wave modulates the horizontal pulse voltage at the cathode of diode modulator D703 through Q663, Q662 and Q661 with a vertical period to vary the H. DY voltage.
The high-voltage beam current is supplied from +B(130V) to the ACL(Automatic Contrast Limiter) terminal of FBT. This produces a voltage proportional to the variations in the brightness at the ACL terminal. This voltage is applied to Q664, Q663 to correct meandering of the picture due to changes in brightness and also apply to Q663 through R663 to correct the size due to brightness change.

VERTICAL DEFLECTION

At I501, the composite video signal from pin 51 are applied to the internal integrated circuit, V separation circuit and V C/D circuit which counts down the horizontal frequency to obtain the vertical frequency. C6A2 at pin 52 of I501 is used for ramp generation, and produces the required sawtooth waveform output from pin 53.

The vertical drive output from pin 53 of I501 is applied to pin 4 of I601 via R6A2, and the vertical output to drive the DY is made available at pin 2. The voltage switching circuit in I601 increases the power voltage at pin 3 during the flyback period to make the flyback line faster.
The V deflection voltage that occurs is added to the DC voltage from pin 2 of I601, the result is applied to pin 54 of I501 and determine the linearity and vertical height.

POWER SUPPLY CIRCUIT

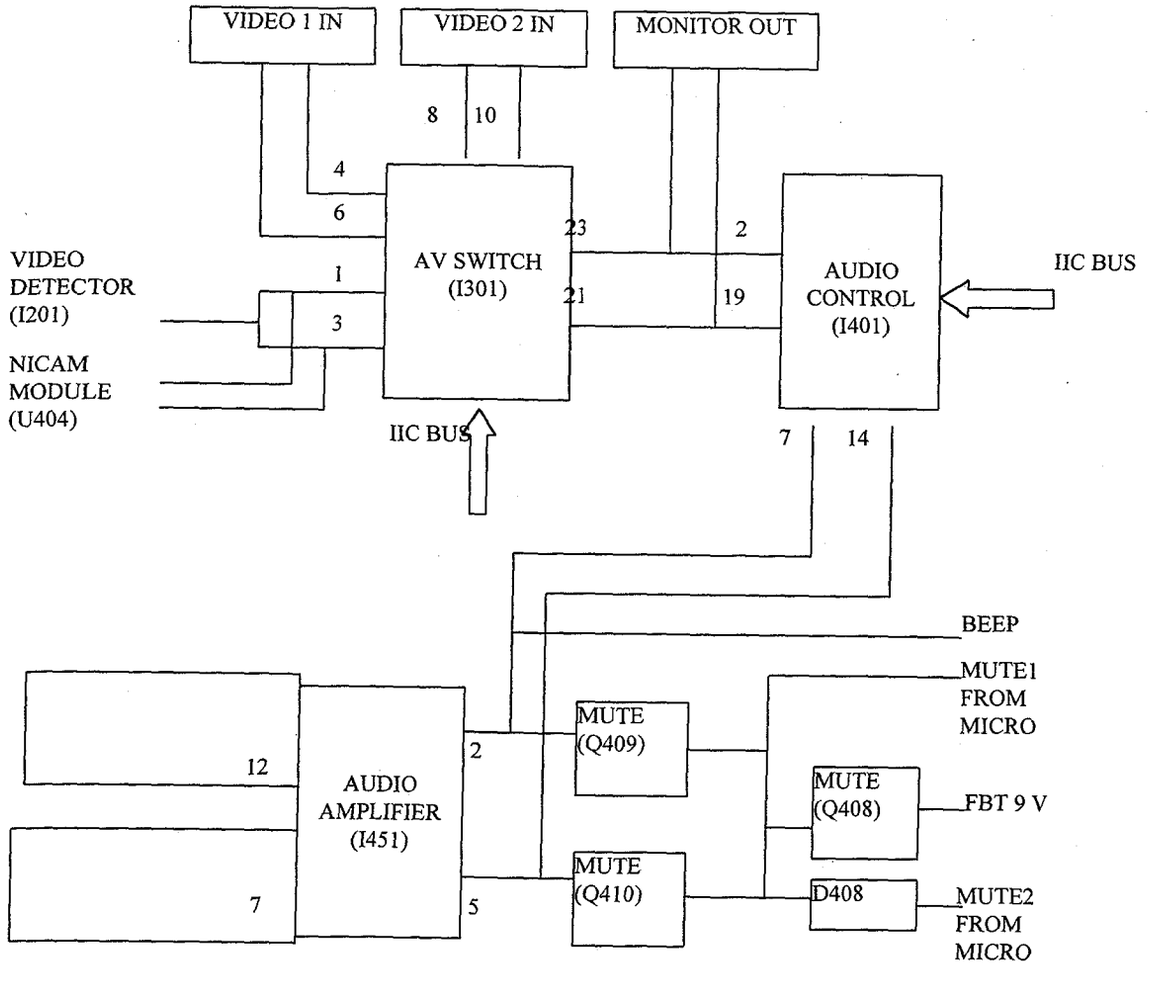
The power supply circuit of V1 chassis is as below.
(1) Starting Operation.
Power switch S901 turned ON → Rectified at D901~D904 → Voltage at Q903 base rises → First switching pluse generated at winding P1-P2 of T901 → Drive voltage → Provide to Q905 of winding B1-B3 of T901 → Q905 supply stable drive voltage and L903 provide drive current to Q903 base → Come into normal operations .
(2) Switching Constant Voltage Operation.
AC input voltage rises or +B load decreased (picture get dark) → +B(130V) rises → Ic increased at Q951 → Id increased at IC901 → Ic increased at IC901 → Voltage decreased at pin 5 of IC901 → ON period of Q901 increased → ON period of Q903 decreased → Positive voltage of D951 anode decreased → +B voltage falls → +B voltage stabilized.
(3) Standby Operation.
Remote control power OFF → I001 pin 16 ⊓ → Q954 off → Q953 off → I501 Vcc pin 3 ⊓ → Horizontal deflection stopped.
Also → Q952 off → R965 connect into R964 → Voltage of Q951 base rises → ON period of Q903 is slightly decreased by IC901 → +B voltage falls(about 65V) → Power consumption decreased.
+5V power provided from T901(S2) winding through D952 and C954 → 5V at pin 22 of I001 stabilized by I004.

AUDIO CIRCUIT

The AV switch I301 receive audio signals from the following 3 locations:
(1) Mono sound from I201 pin 1, 3 or Stereo sound from U404(Nicam/A2 module) pin1(L) pin 3(R).
(2) Video 1 in via pin 4(L1) and pin 6(R1).
(3) Video 2 in via pin 8(L2) and pin 10(R2).

The signals to be proceeded are selected in I301. I301 is controlled by IIC bus. Outputs of I301, pin 21 & 23, are sent both to Monitor out and pin 2 & 9 of Audio Control(I401). IIC bus control I401 for volume, left and right audio output, treble and bass outputs.

L-out and R-out of I401, pin 7 and pin 17 respectively, are joined with MUTE control transistors(Q408, Q409 and Q410). These transistors are controlled by Micro IC(I001). When mute is requested Q409 and Q410 are grounded and no signal is sent to audio amplifier(I451) and made audio mute possible. Otherwise, signals are sent to pin 2 and 5 of audio amplifier I451. After amplification of audio signals, they are then sent out as audio outputs of system via pin 12 and 7 to headphone and speakers.



NICAM / A2 (051/751/081S/PX-981 only)

The analog sound IF signal is being inputted to a high pass filter. It has a frequency response whereby the chroma signal will be suppressed to prevent interference. The signal is amplified before injected into the IC1.

The SIF signal after received by IC1 will perform either a digital or analog demodulation based on the carrier frequency being identified. The table below shows the standard specifications of different systems.

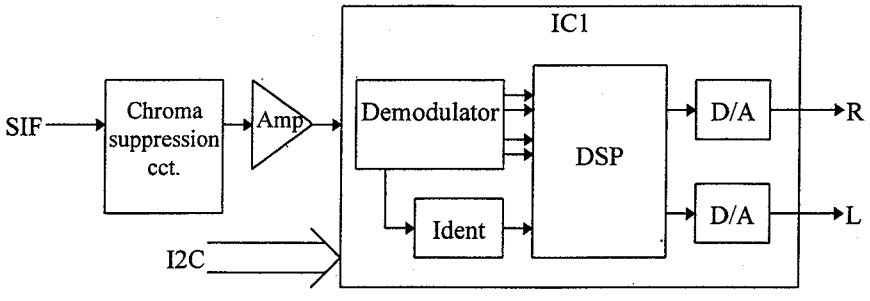
No.	Specification	NICAM		A2	
		UK	Scadinavia / Spain	Channel FM1	Channel FM2
1	Carrier frequency	6.552MHz	5.85MHz	5.5MHz	5.7421875Mhz
2	Carrier frequency of analog sound component	6.0Mhz FM mono	5.5Mhz FM mono	-	-
3	Vision/sound power difference	10dB	13dB	13dB	20dB
4	Pilot carrier frequency	-	-	-	54.6875kHz
5	Modulation frequency	-	-	-	mono: unmodulated stereo : 117.5Hz dual : 274.1Hz

In NICAM system, the digital encoded data contains the information bits on NICAM, Stereo, Bilingual or FM mode. It can be selected using remote controller, either CH I / II / FM. The system will automatically switch to stereo mode if the error received exceeds a certain limit.

Whereas in A2 system, a pilot carrier frequency imposed on the FM2 Channel shows the present of stereo and bilingual sound. The mode of operation depends on the modulation frequency received and user's selection.

Remote controller	NICAM	A2
CH I	NICAM STEREO	A2 STEREO
CH II	BILINGUAL	BILINGUAL
FM	FM mono	FM mono

After demodulation and decoding, the sound is being outputted to the L and R channel. All the IC1 operation is being controlled by I2C bus.



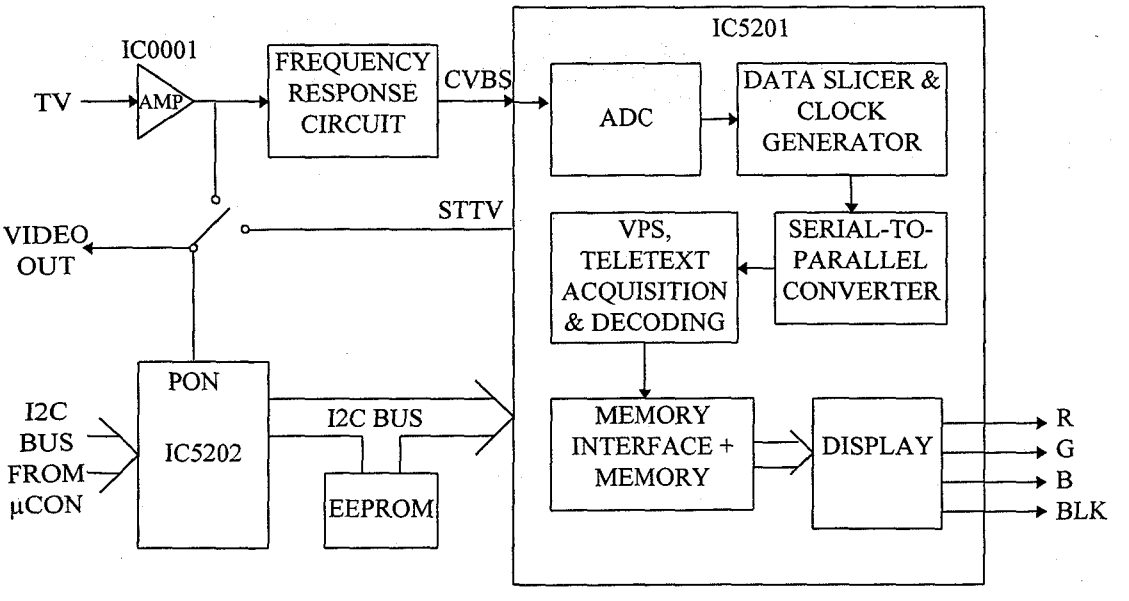
Block diagram of the NICAM/A2

Teletext Circuit (081S/PX-981 only)

In teletext mode, the tv signal is being amplified by the IC001. The signal after amplification is injected into the frequency response circuitry for better reception. It is received by IC5201 where acquisition, decoding and data processing are being performed. The RGB and Blk signals are outputted.

On the other hands, IC5202 received the commands from the main µcon through I2C Bus. It analyzed and re-decoded the commands for controlling IC5201 operation.

Whereas in Mix and TV modes, a "HIGH" is outputted from IC5202 to switch on Q006. The signal that had been amplified is redirected to the video out pin.

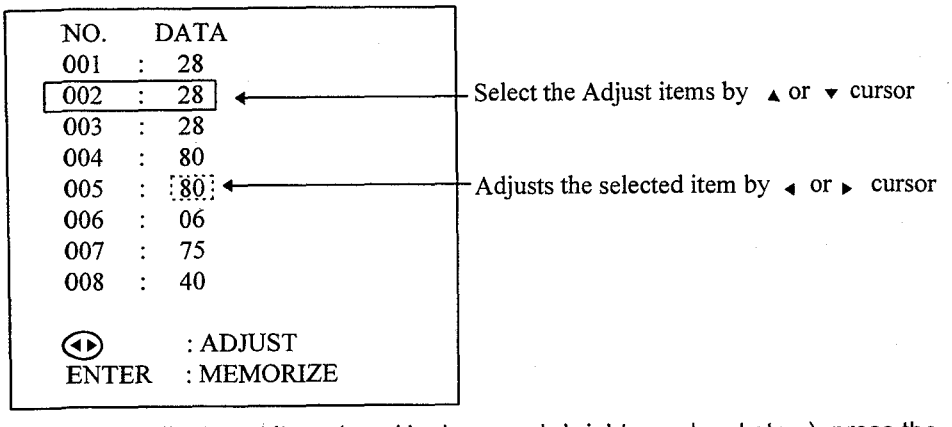


Block diagram of Teletext decoder

ADJUSTMENT INSTRUCTIONS
(调整说明)

IIC ADJUSTMENTS

Most of the adjustment items in S6 chassis are control by IIC. Any changes on CRT, CPU IC, Video/Chorma IC or V. deflection IC(I601), please readjust the items shown in table 1.
To start the IIC adjustment, please ensure the AC power switch is at "off" position. Press the TV/VIDEO button on the front panel and then press the power switch while pressing TV/VIDEO button. Release all butttons after the following displays appeared on screen.



To select the adjustment items(e.g. H. phase, sub-brightness level etc...), press the ▲ or ▼ cursor button on Remote control handset. To adjust the data of selected item, press the ◀ or ▶ cursor button on Remote control handset.

After completed the adjustments, press the ENTER button on Remote control handset (memorized). Press MENU button or turns off the TV set to end the IIC adjustment.

VERTICAL CENTER ADJUSTMENT

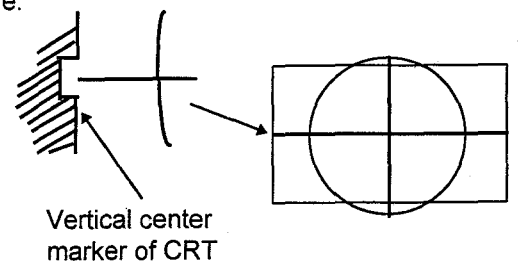
PREPARATION		PROCEDURES	
1.	Turns on the TV set & heat run about 5 min.	1.	Select the IIC control address No 54.
2.	Receive the circular pattern signal.	2.	Set the horizontal center line to vertical center marker of CRT by adjustment of IIC. i.e.
3.	AC 220+ - 1v.		

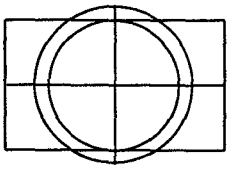
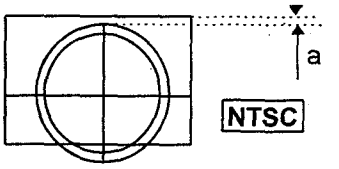
TABLE 1. IIC BUS CONTROL/ADDRESS

ADJ No.	NAME OF ADJUSTMENT	DATA DISPLAY	INITIALIZE DATQA	DJUST WHEN CHANG EMOR	CPT	V/C IC
1	R CUT OFF	0～255	0	○	○	○
2	G CUT OFF	0～255	0	○	○	○
3	B CUT OFF	0～255	0	○	○	○
4	G DRIVE GAIN	0～255	80	○	○	○
5	B DRIVE GAIN	0～255	80	○	○	○
6	HORIZONTAL POSITION	0～31	10	○	○	○
7	SUB-COLOUR	-127～+127	0	○	X	X
8	SUB-TINT	-63～+63	0	○	X	X
9	SUB-BRIGHT	-127～+127	0	○	X	X
10	SUB-CONTRAST	-127～+127	0	○	X	X
11	SUB-SHARPNESS	-31～+31	0	○	X	X
12	Y-SUB-CONTRAST	-16～+16	0	○	X	X
13	P/N KILL	0, 1	0	○	X	X
14	DTrp-SWTCH	0, 1	1	○	X	X
15	R-MON	0, 1	0	○	X	X
16	B-MON	0, 1	0	○	X	X
17	SUB-RGB-CONTRAST	-127～+127	0	○	X	X
18	AUDIO-ATT GAIN	0～127	0	○	X	X
19	γ ON/OFF	0, 1	0	○	X	X
20	WHITE PEAK LIMIT SWITCH	0, 1	0	○	X	X
21	PEAK ACL SWITCH	0, 1	0	○	X	X
22	BLUE BACK MODE SELECT	0～3	0	○	X	X
23	Y-DELAY TIME	0～7	4	○	X	X
24	AFC MODE	0～3	0	○	X	X
25	H-OUT CLOCK SWITCH	0, 1	0	○	X	X
26	B. S. OFF	0, 1	0	○	X	X
27	CHROMA TRAP ON/OFF SW	0, 1	0	○	X	X
28	BLACK OFFSET SECAM JUDGESW	0, 1	0	○	X	X
29	P/N TOF ON/OFF SW	0, 1	0	○	X	X
30	PAL GATE POSITION	0, 1	0	○	X	X
31	COLOUR LIMIT ON/OFF	0, 1	0	○	X	X
32	WIDE V-BLK ON/OFF	0, 1	0	○	X	X
33	WIDE PICTURE MUTE ON/OFF	0, 1	0	○	X	X
34	SECAM DETECT	0, 1	0	○	X	X
35	3.58TRAP	0, 1	0	○	X	X
36	FORCE B/WSWITCH	0, 1	0	○	X	X
37	X'TAL MODE	0～7	0	○	X	X
38	R-Y SECAM W/B	0～15	8	○	X	X
39	B-Y SECAM W/B	0～15	8	○	X	X
40	COLOUR LIMIT LEVEL	0～3	2	○	X	X
41	P/N COLOR AMPLITUDE ADJUST	0～3	0	○	X	X
42	TOF Q ADJUSTMENT	0～3	2	○	X	X
43	TOF F0 ADJUSTMENT	0～3	0	○	X	X
44	CHROMA TRAP Q CONTROL	0～3	2	○	X	X
45	CHROMA TRAP F0 CONTROL	0～3	2	○	X	X
46	BLACK STRETCH START POINT	0～7	4	○	X	X
47	DC CORECTION LEVEL SW	0～7	0	○	X	X
48	APA-CON PEAK F0 SWITCH	0～3	2	○	X	X
49	APL DETECT VOLTAGE	0～7	4	○	X	X
50	APL SENSITIVITY	0～7	0	○	X	X
51	HALF TON GAIN SW	0～3	2	○	X	X
52	H BLK POSITION	0～7	0	○	X	X
53	V. FREQUENCY	0～3	0	○	X	X

TABLE 1. IIC BUS CONTROL/ADDRESS(CONTINUE)

54	V. POTISION	0~7	0	○	○	○
55	V. SIZE	0~127	40	○	○	○
56	SW FOR SIGNAL OF DET	0~3	2	○	X	X
57	V. S CORECTION	0~127	40	○	○	○
58	SELECT FOR BASE LINE OF DRIVE	0, 1	0	○	○	○
59	V LINEARITY	0~31	0	○	○	○
60	V-COUNT DOWN MODE SW	0, 1	0	○	X	X
61	ALL DRIVEGAIN FORCE CENTRE SW	0, 1	0	○	X	X
62	SW FOR TIME CONSTANT OF V RAMP	0, 1	1	○	X	X
63	SELECT FOR POSITION OF FRONT OF VERTIC	0~63	3F	○	X	X
64	BLANKING ON/OFF	0, 1	0	○	X	X
65	SELECT FOR POSITION OF BACK OF VERTICA	0~127	0	○	X	X
66	SW FOR DET LEVEL OF NOIZE	0~3	2	○	X	X
67	SELECT FOR PRE-MUTE OF PICTURE	0~63	3F	○	X	X
68	SELECT FOR MATRIX AT 1H	0, 1	0	○	X	X
69	SELECT FOR AFTER MUTE OF PICTURE	0~127	0	○	X	X
70	SW FOR COLOR & Q OF SECAM ON WEEK SIGN	0, 1	0	○	X	X
71	ADJUSTMENT FOR AMPRITUD OF COLOR ON SE	0, 1	0	○	X	X
72	SELECT FOR TIME CONSTANT OF DE-EMPHASI	0, 1	0	○	X	X
73	SECAM GATE POSITION SW	0, 1	0	○	X	X
74	SECAM V-ID ON/OFF SWITCH	0, 1	0	○	X	X
75	SECAM KILLER SENSITIVITY	0, 1	0	○	X	X
76	BELL FILTER ADJUST	0~3	1	○	X	X
77	INT/EXT SW	0, 1	0	○	X	X
78	AUDIO MUTE ON/OFF	0, 1	0	○	X	X
79	COLOR SYSTEM SW	0~3	0	○	X	X
80	MUTE MODE	0~3	0	○	X	X
93	OPERATE AT PICK UP NOIZE	0, 1	0	○	X	X
94	INPUT LEVEL ADJUST	0~63	20	○	X	X
95	FH MONITOR ON/OFF	0, 1	0	○	X	X
96	STEREO VCO ADJUST	0~63	20	○	X	X
97	PILOT CANCELER ON/OFF	0, 1	0	○	X	X
98	FILTER ADJUST	0~63	3F	○	X	X
99	FILTER ADJUST	0~63	20	○	X	X
100	LOW FREQ. SEPARATION ADJUST	0~63	20	○	X	X
101	HIGH FREQ. SEPARATION ADJUST	0, 1	0	○	X	X
102	5fH MONITOR	0~63	20	○	X	X
103	SAP VCO ADJUST	0, 1	1	○	X	X
104	MUTE ON/OFF	0~63	15	○	X	X

VERTICAL SIZE ADJUSTMENT

PREPARATION	PROCEDURES
1. Turns on the TV set & heat run about 5 min. 2. Receive circular pattern signal (PAL). 3. Set all picture settings to normal condition(i.e. Brightness : Max, Others : 0) 4. AC 220 +-1V.	1. Select the IIC control address No 55. 2. Adjust IIC data to obtain the following condition. i.e.  PAL PICTURE TOP : Inner circle reach the edge of TV raster. PICTURE BOTTOM : Inner circle reach the edge of TV raster. 3. Receive the NTSC circular signal, and check the picture size after the above V size adjustment. 4. If a > 0mm, go back to IIC control No 54(V-center adjustment), increase the IIC data by 1 position.  a NTSC

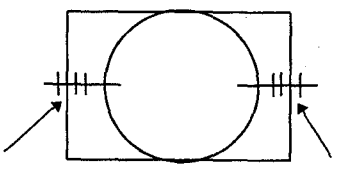
SIDE PIN-CUSHION DISTORTION ADJUSTMENT

PREPARATION	PROCEDURES
1. Perform this adjustment after the purity and convergence adjustment. 2. Receive the circular pattern signal. 3. Set the Contrast to max. and Back level to normal. 4. The horizontal size adjustment. 5. Set the horizontal size VR R657 to the mechanical center. 6. Perform this adjustment after the Vertical size adjustment.	1. Adjust R656 so that all vertical lines except the lines at both the left and right ends are straight. 2. Receive the Cross Hatch signal, check that the verticial lines are straight except the 1st outer vertical line(R/L).

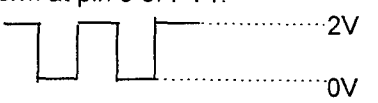
HORIZONTAL CENTER ADJUSTMENT

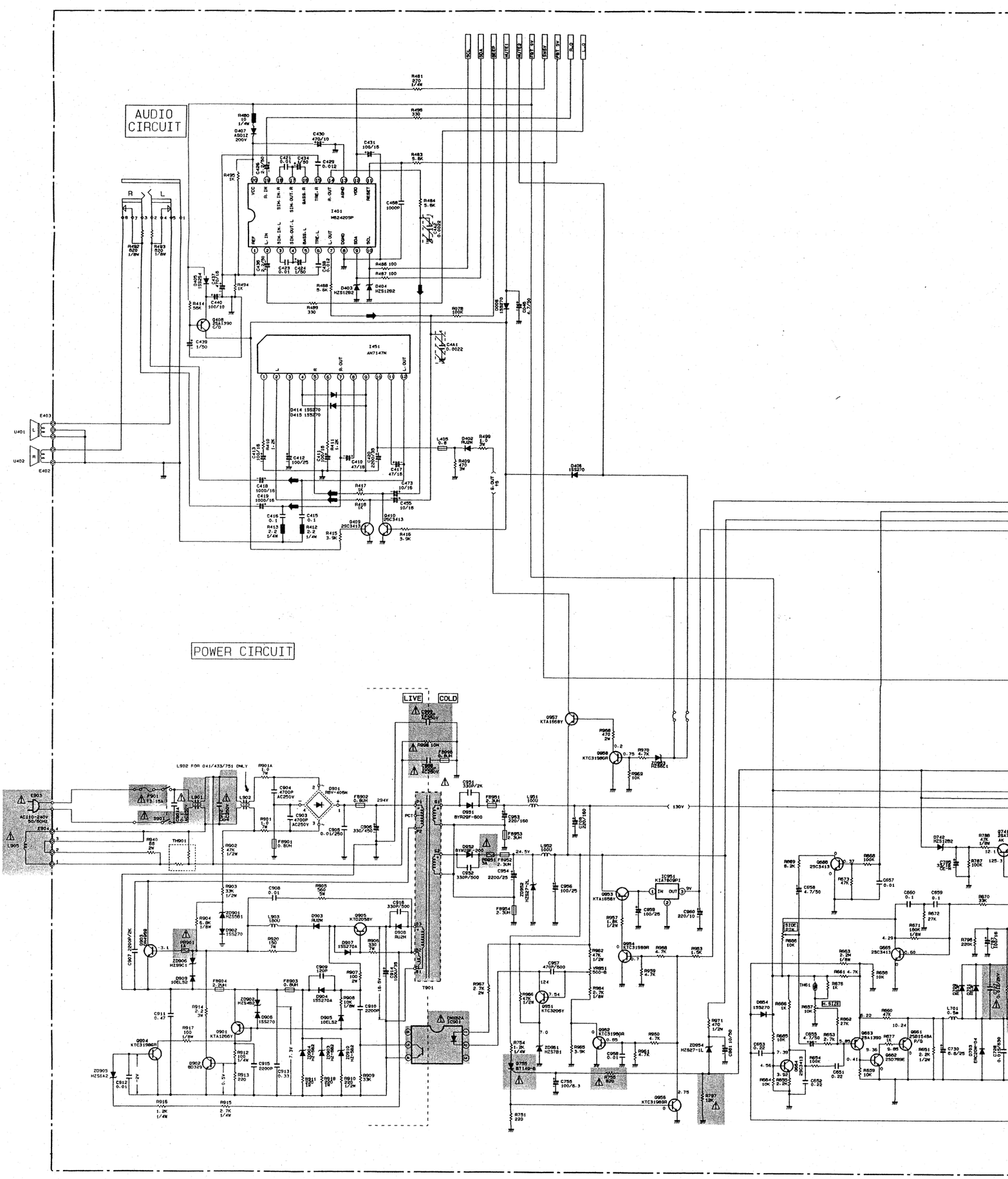
PREPARATION	PROCEDURES
1. Perform this adjustment after the Side pin adjustment. 2. Receive the circular pattern signal.	1. Select the IIC control address No 06. 2. Adjust the picture center to meet the CRT geometrical center.

HORIZONTAL SIZE ADJUSTMENT

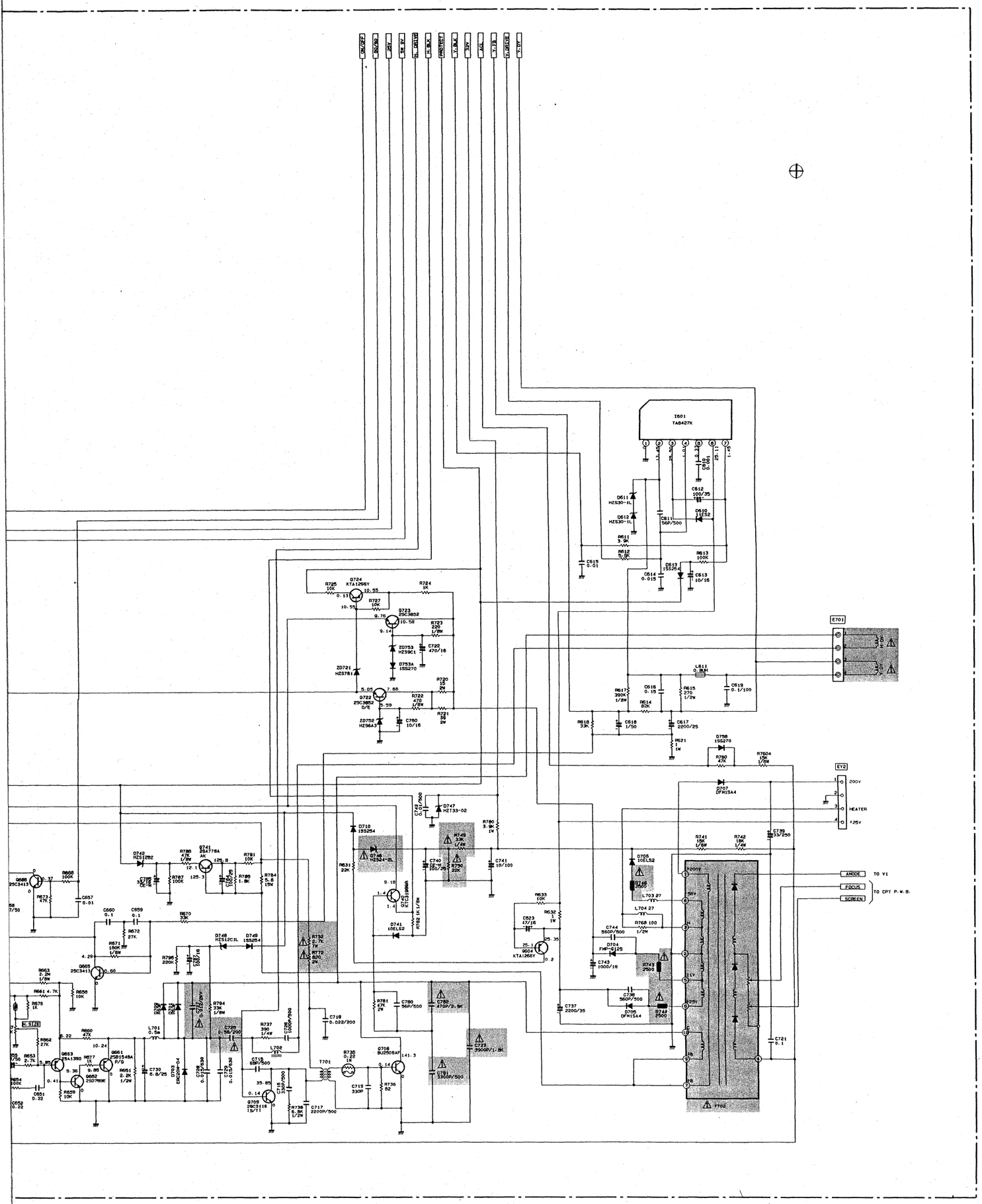
PREPARATION	PROCEDURES
1. Perform this adjustment after H. center adjustment. 2. Receive the HITACHI circular pattern signal(PAL). 3. Set the Contrast at Max, and others at 0(center).	1. Turn R657 to Max(clockwise). 2. Adjust R657 so that the average reading of right and left is 1.5+-0.5. i.e 

WHITE BALANCE ADJUSTMENT

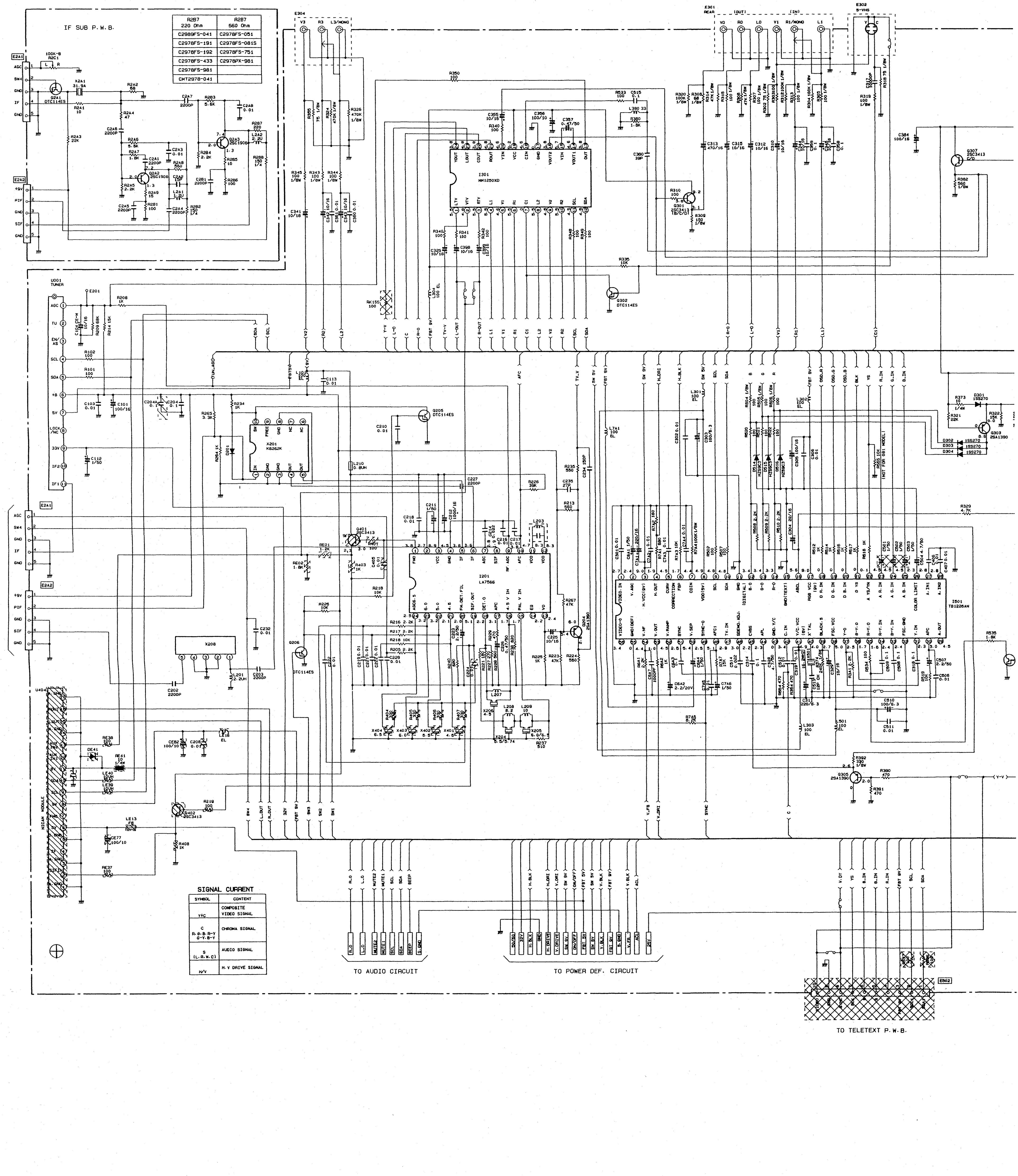
PREPARATION	PROCEDURES
1. Switch on the TV set for at lease 20mins. 2. Adjust this adjustment after the Purity adjustment. 3. Ensure the vertical incident illuminatin on CRT surface to be 20 lux or less. 4. Receive the white balance raster. 5. Set the following settings by Remote control handset. Contrast : Max Brightness : Center Color : Min	1. Connect and measure the waveform at No.5 pin of connector PY1(or pin 14 of I501). 2. Select the IIC Control address No 01(Cut-off red) and adjust the data to obtain the following waveform at pin 5 of PY1.  3. Select the IIC control address No 02(Cut-off green) and No 03(Cut-off blue), adjust both datas to the same data number as in address No 01. 4. Select the IIC control address No 04(Blue drive) and No 05(Red drive), adjust both datas to 80. 5. Turn the screen VR of FBT fully counter-clockwise. 6. Press the TV/VIDEO button 3 times to obtain the lateral line mode. 7. Turn the screen VR clockwise and set it to the position where the bright colored line starts to appear. 8. Release the lateral line mode by pressing TV/VIDEO button once. 9. Set the W/B meter probe at the center of the screen. 10. Do the W/B adjustment to the desired W/B color temperature by using the following keys of IIC. IIC Adress No R BKG 01 G BKG 02 B BKG 03 R DRIVE 04 B DRIVE 05 Note : To obtain the low brightness and high brightness conditions, adjust the Brightness control of remote control handset.


AUDIO CIRCUIT
POWER CIRCUIT
SCL
SDA
RESP
MUTE1
MUTE2
SBY 5V
SBY 9V
ESD7
R.O
L.O
I401 M62420SP
I451 AN7147N
IC901 TDA8174
T901
LIVE
COLD
130V
9V
5V
STBY 5V
H.SIZE
L902 FOR 041/433/751 ONLY

PRODUCT SAFETY NOTE : Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- Since this is basic circuit diagram, the value of the parts is subject to be altered for improvement
- All DC voltage to be measured with a teser (100k Ω/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.



IF SUB P.W.B.
U001 TUNER
NICAM MODULE
X201 K6262K
I201 LA7566
I301 MM1250XD
I501 TB1226AN
E2A1
E2A2
E301 REAR
E302 S-VHS
E304
E502
TO AUDIO CIRCUIT
TO POWER DEF. CIRCUIT
TO TELETEXT P.W.B.
SIGNAL CURRENT
SYMBOL | CONTENT
Y+C | COMPOSITE VIDEO SIGNAL
C R.G.B.R-Y G-Y.B-Y | CHROMA SIGNAL
S (L.R.M.C) | AUDIO SIGNAL
H/V | H.V DRIVE SIGNAL
R2B7 220 Ohm | R2B7 560 Ohm
C2989FS-041 | C2978FS-051
C2978FS-191 | C2978FS-081S
C2978FS-192 | C2978FS-751
C2978FS-433 | C2978PX-981
C2978FS-981 |
CMT2978-041 |
(NOT FOR 081 MODEL)

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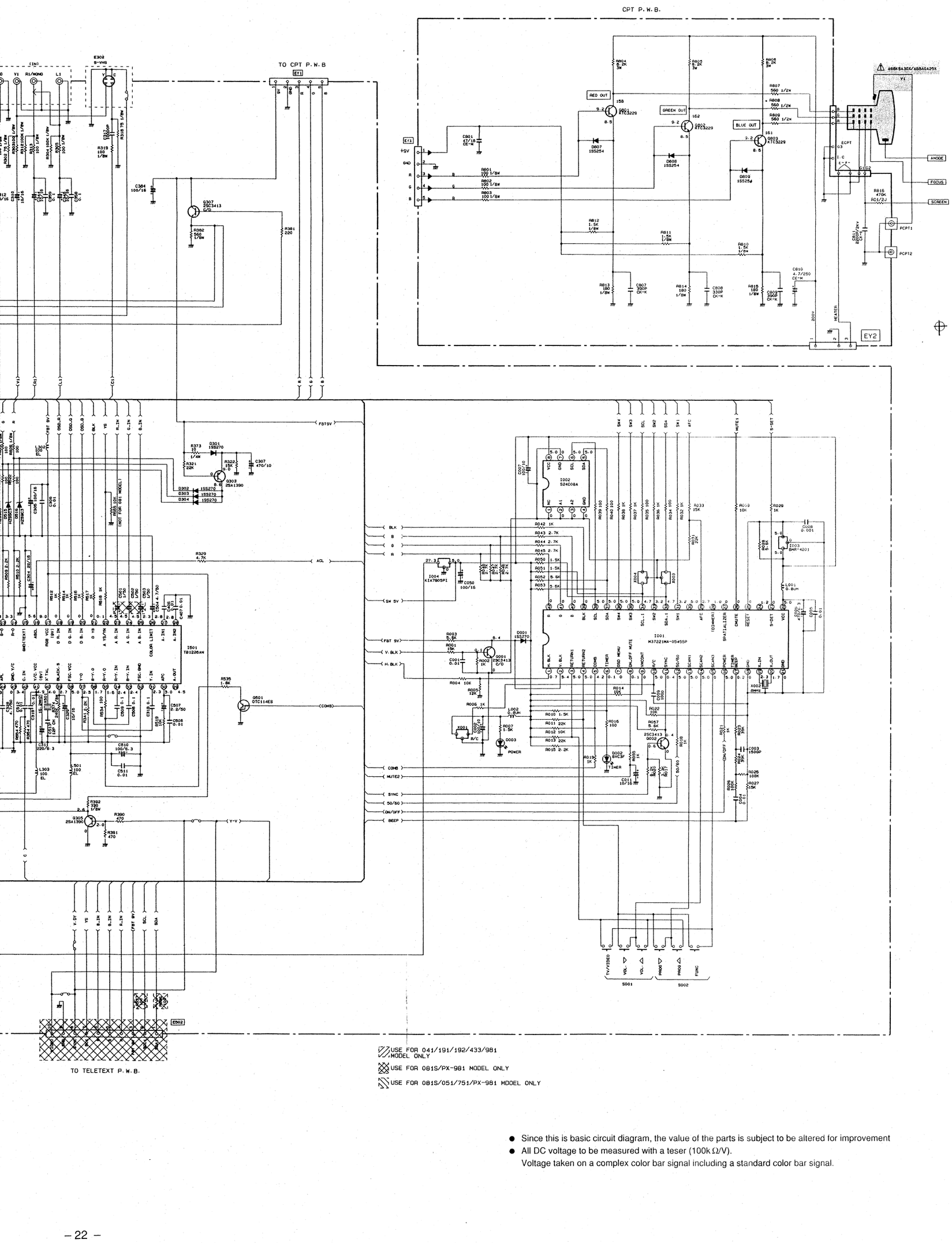
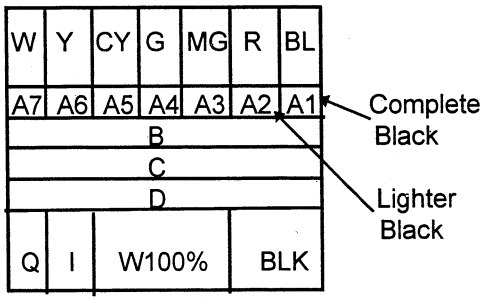
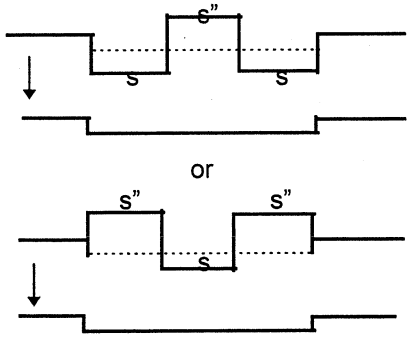


- Since this is basic circuit diagram, the value of the parts is subject to be altered for improvement
- All DC voltage to be measured with a teser (100k Ω/V).
  Voltage taken on a complex color bar signal including a standard color bar signal.

SUB-BRIGHTNESS ADJUSTMENT

PREPARATION	PROCEDURES
1. Swith on the TV set for at lease 20mins. 2. Adjust this adjustment after the Horizontal size and Side pin cushion adjustment. 3. Ensure the vertical incident illumination on CRT surface to be 20 lux or less. 4. Receive color bar pattern signal. 5. Set the following settings by remote control handset. Contrast : Min Color : Min Brightness : Center	1. Select the IIC control address No. 09. 2. Adjust the data until A1 portion becomes black and A2 portion becomes lighter black. i.e 

SUB-TINT ADJUSTMENT

PREPARATION	PROCEDURES
1. Receive the color bar signal (NTSC). 2. Set the following settings by Remote Control handset. Contrast : Max Tint : Center Color : Center Black Level : Center Sharpness : Center	1. Connect and measure the waveform at pin 5 of EY1(R signal). 2. Select the IIC address No. 08. 3. Adjust the data to obtain the following waveform (s and s" to same level). 

+B ADJUSTMENT

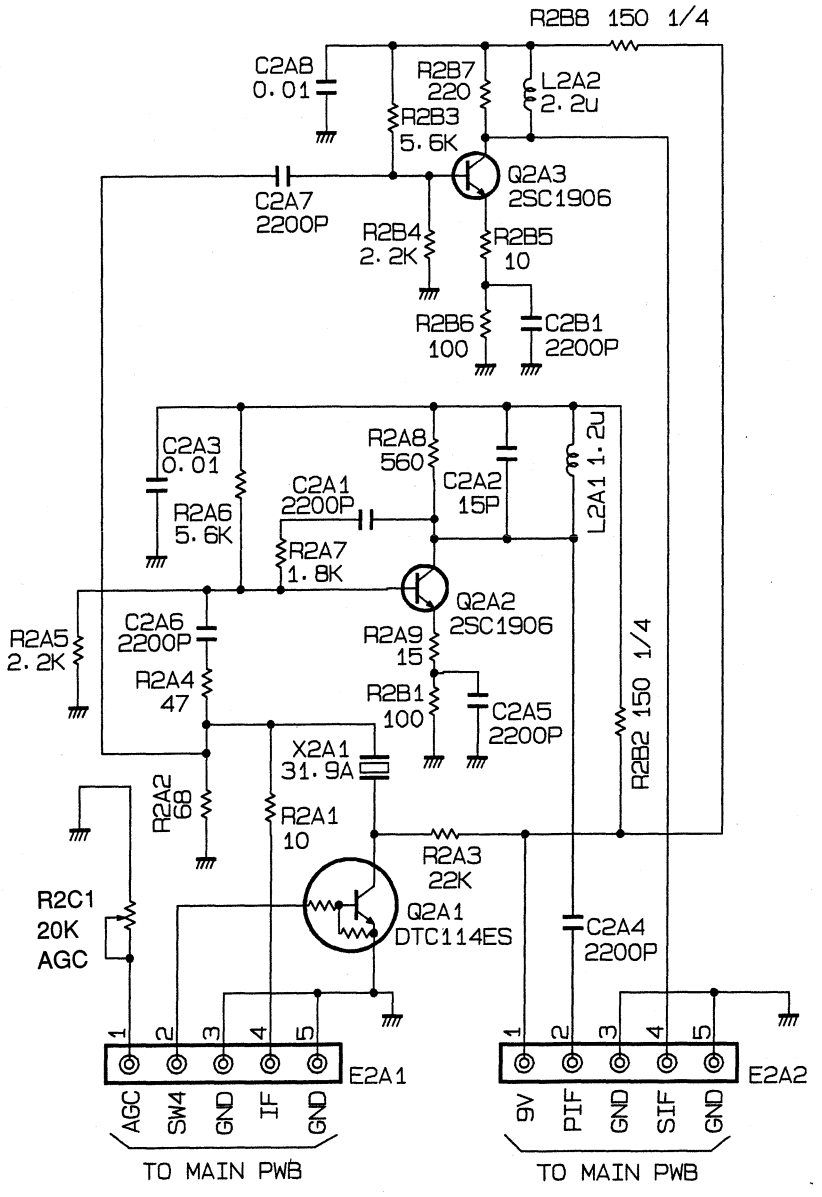
PREPARATION	PROCEDURES
1. AC input voltage 220+-5V(50HZ). 2. Turns on the set and set the brightness and contrast to Max. (Signal : PHILIPS Pattern) 3. After 30 sec heat-run, check & adjust the +B voltage. **Measuring Point** : +B voltage : C953 + side GND : C953 - side	1. Adjust VR951 to obtain +B voltage as below. +B voltage = 130 +-0.3V

CIRCUIT DIAGRAMS
(电路图)

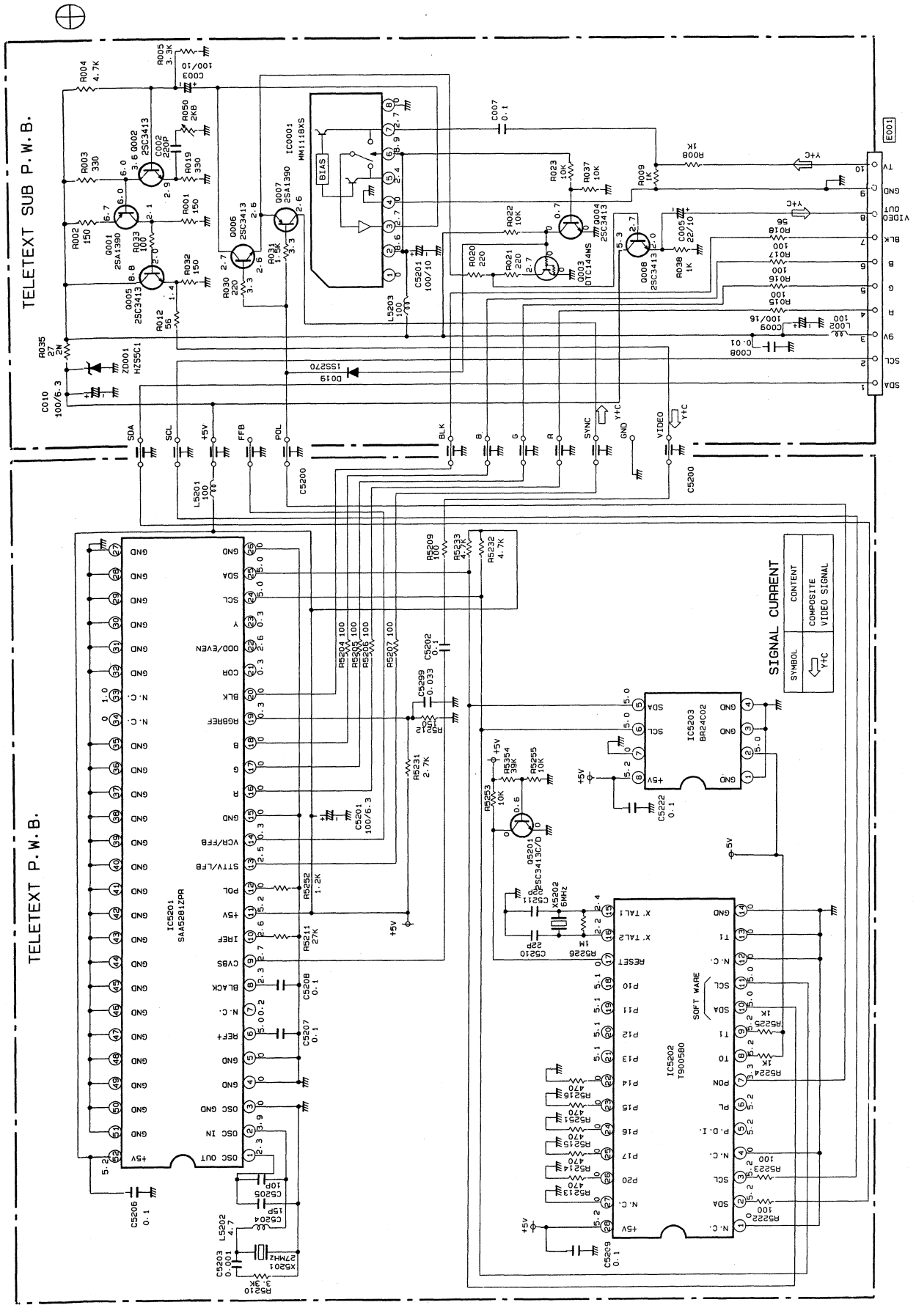
The circuit diagrams of VI 25" consisted of the following.

1. IF SUB PWB (Pg.24 - A4 Size)
2. T/TEXT PWB (Pg.25 - A4 Size)
3. POWER/DEFLECTION CIRCUIT (Pg.21 - A2 Size)
4. SIGNAL & CPU CIRCUIT (Pg.22 - A2 Size)

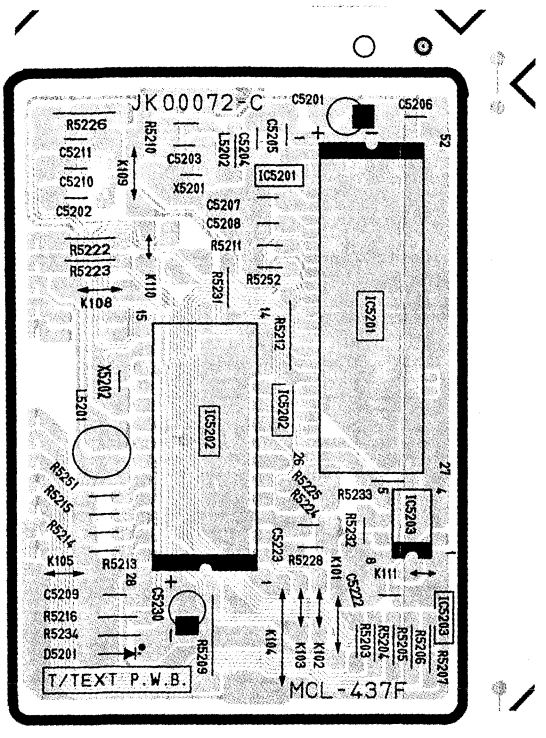
CIRCUIT DIAGRAM : IF SUB PWB



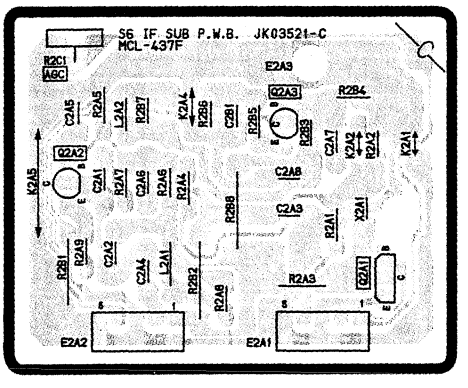
CIRCUIT DIAGRAM : T/TEXT PWB (FOR 081S/PX-981 ONLY)



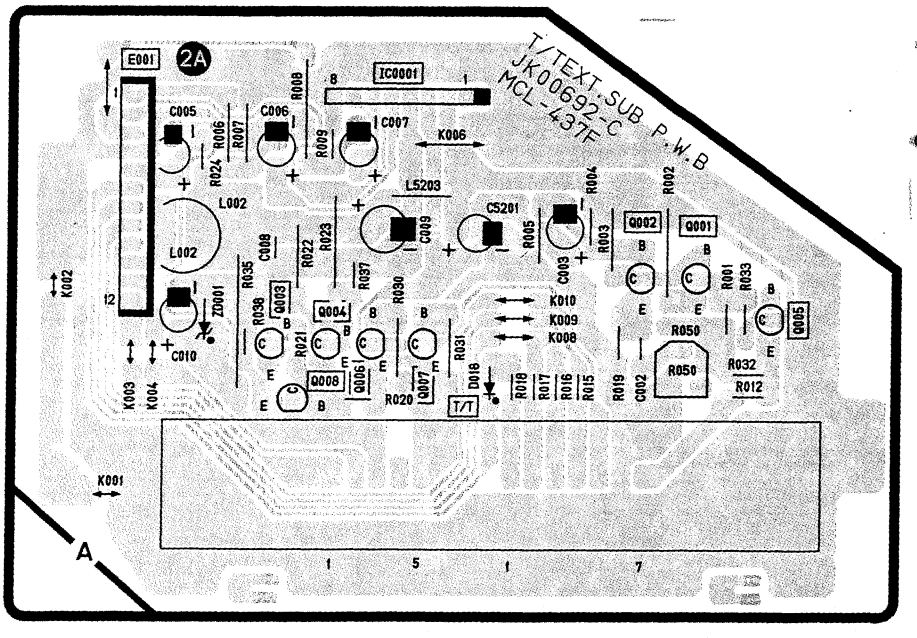
T/TEXT PWB (081S/PX-981 ONLY)



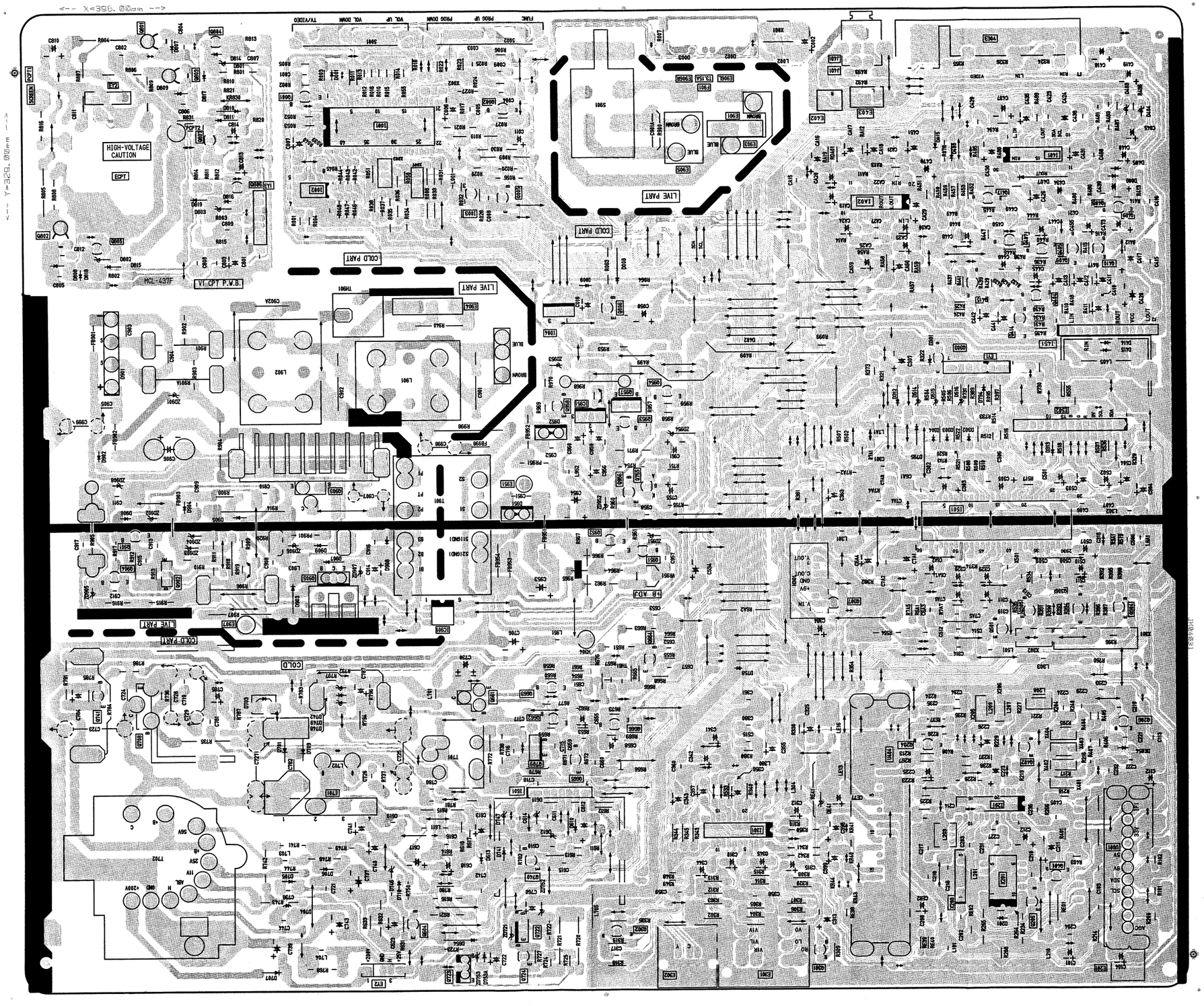
IF SUB PWB



T/TEXT SUB PWB (081S/PX-981 ONLY)

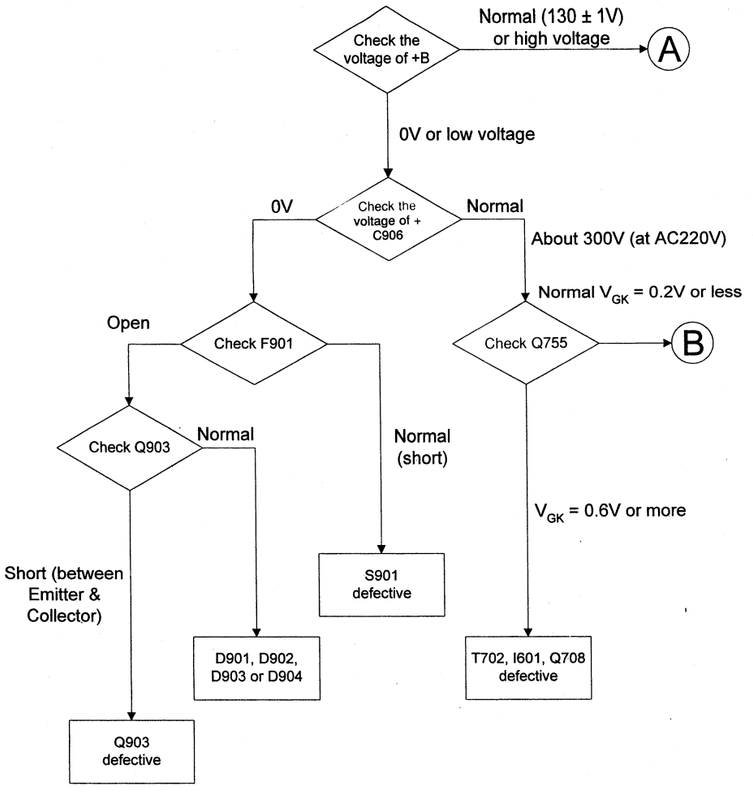


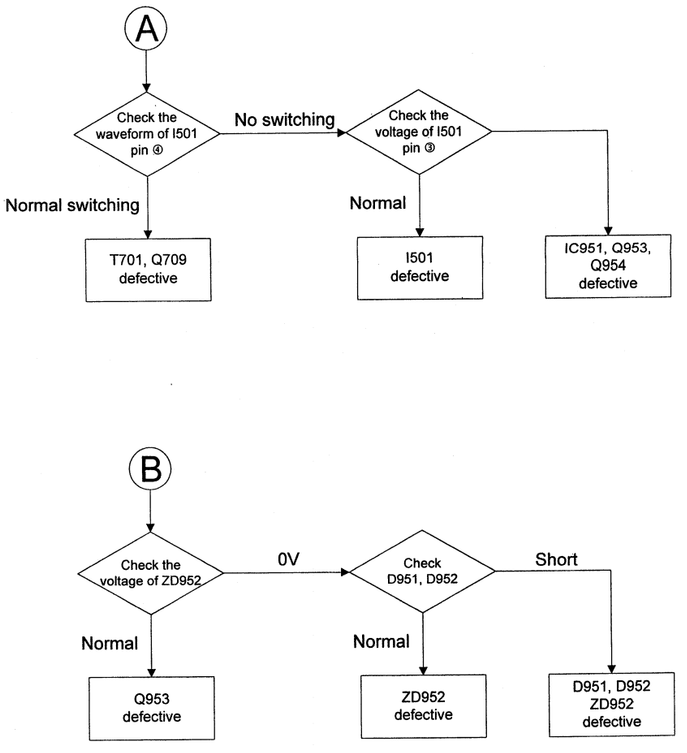
MAIN P.W.B（主印刷电路板）



TROUBLESHOOTING (故障索引)

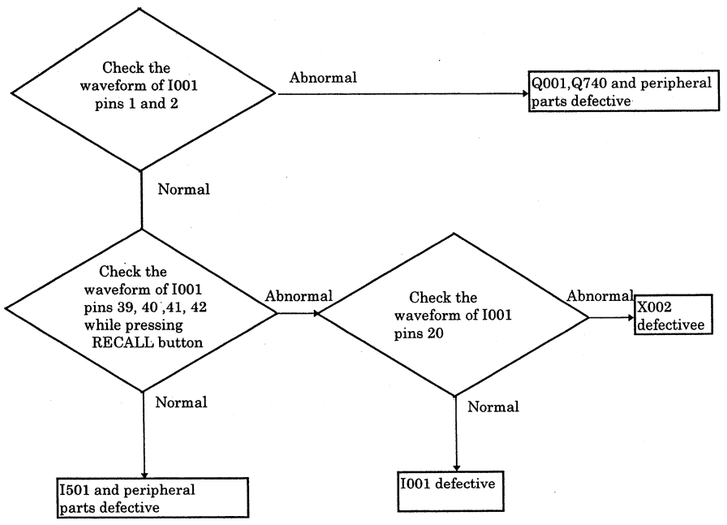
① NO RASTER AND SOUND



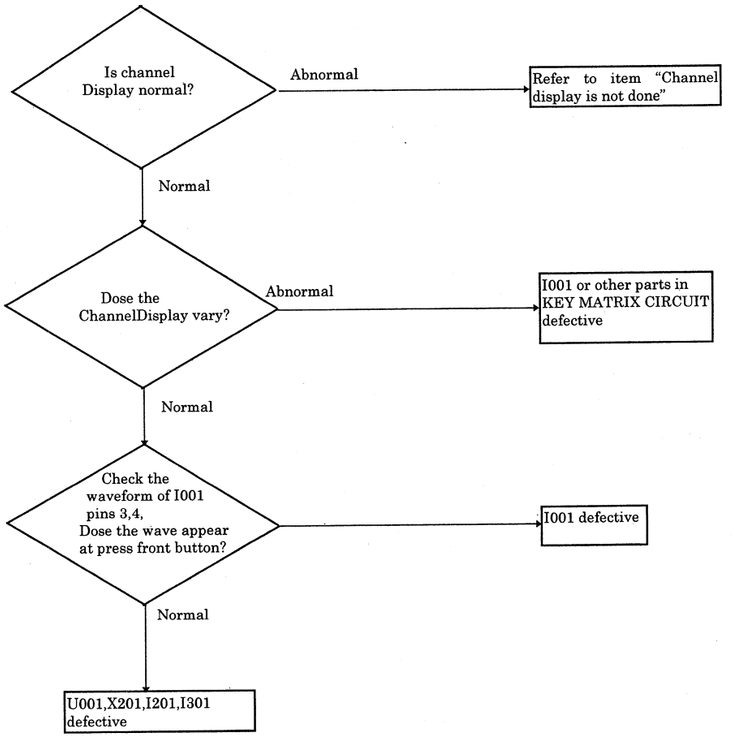


TROUBLESHOOTING (故障索引)

② CHANNEL DISPLAY IS NOT DONE

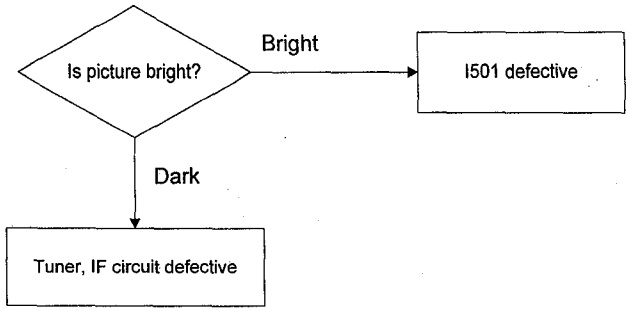


③ CHANNEL SELECTION IS NOT DONE

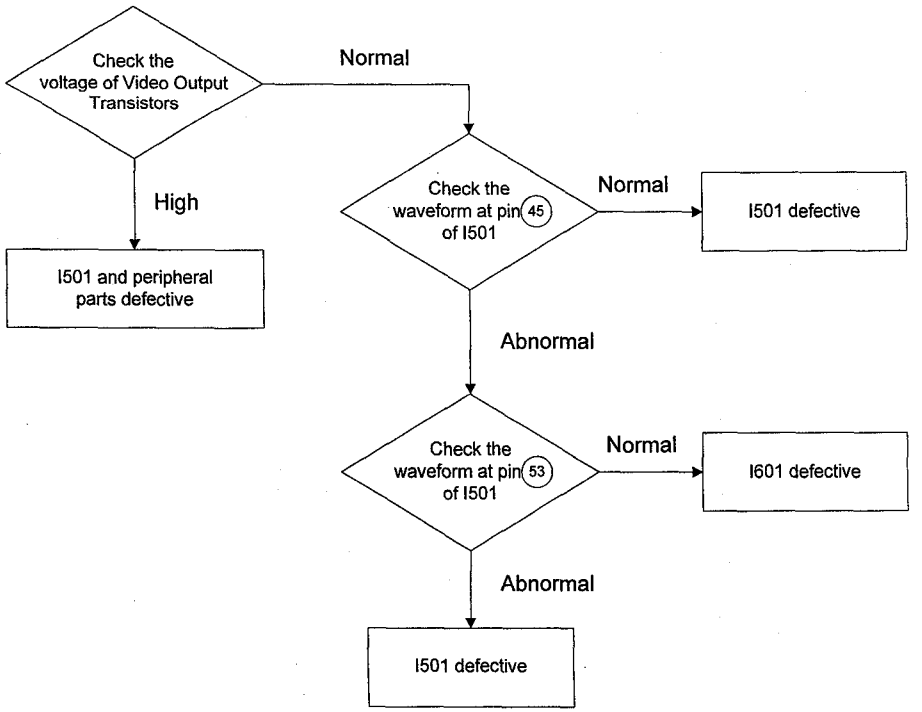

Is channel Display normal?
Abnormal
Refer to item "Channel display is not done"
Normal
Dose the ChannelDisplay vary?
Abnormal
I001 or other parts in KEY MATRIX CIRCUIT defective
Normal
Check the waveform of I001 pins 3,4, Dose the wave appear at press front button?
I001 defective
Normal
U001,X201,I201,I301 defective

TROUBLESHOOTING (故障索引)

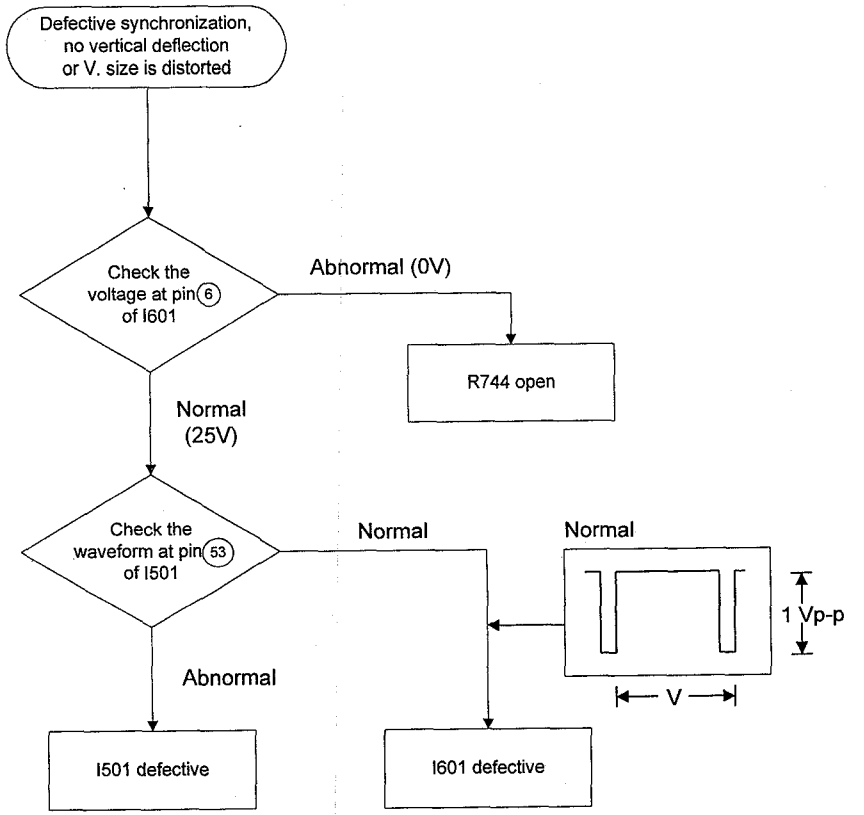
④ NO SYNC.



⑤ ONLY RASTER OR FLYBACK TRACE APPARENT ON PICTURE

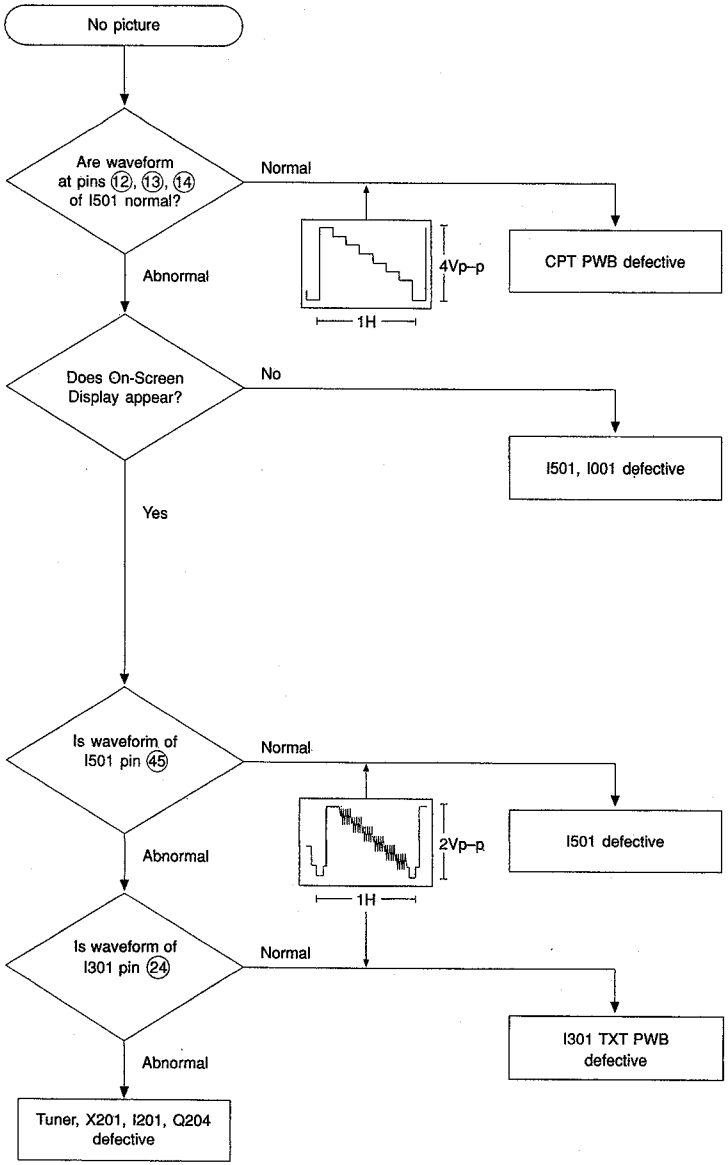


⑥ DEFECTIVE SYNCHRONIZATION, NO VERTICAL DEFLECTION OR V. SIZE IS DISTORTED

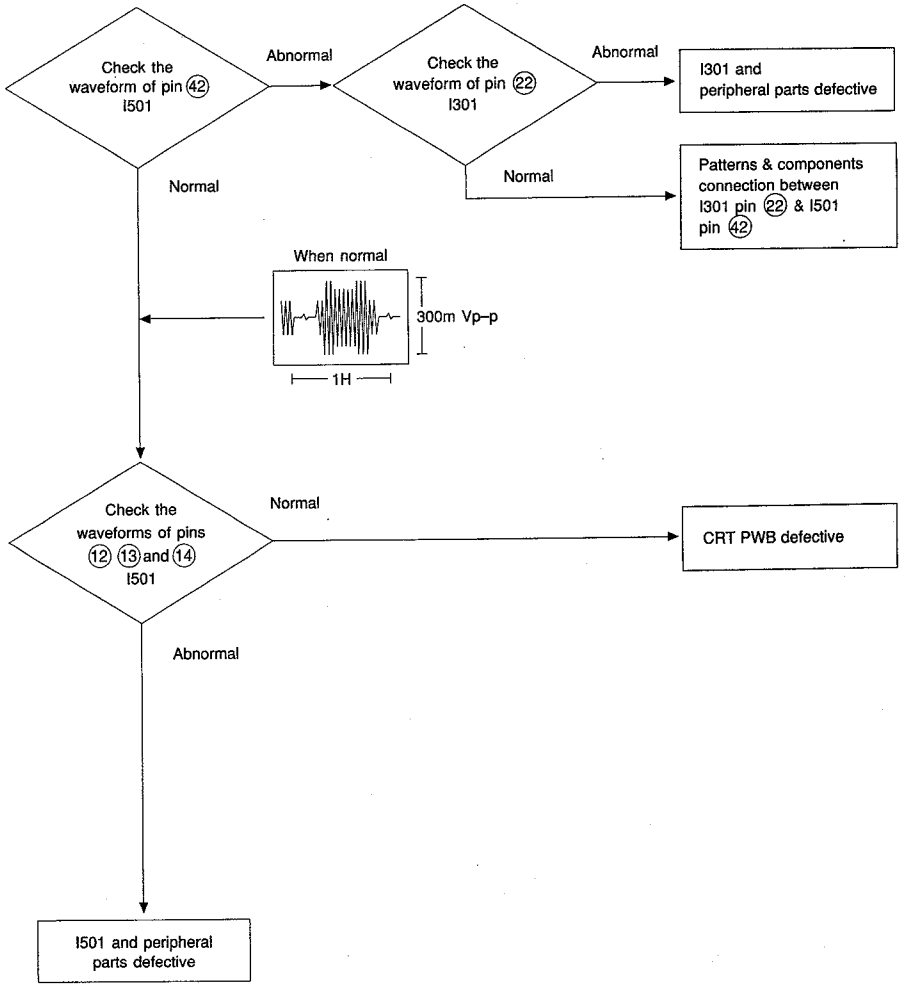


TROUBLESHOOTING (故障索引)

⑦ NO PICTURE



⑧ NO COLOR



REPLACEMENT PARTS LIST

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS Capacitors.....CD: Ceramic Disk, PF: Polyester Film, EL: Electrolytic, PP: Polypropylene, PR: Paper, TA: Tantalum, TM: Trimer.
Resistors.....CF: Carbon film, WW: Wire Wound, FR: Fuse Resistor, MG: Metal Glazed, VR: Variable Resistor, CC: Carbon Composition, MF: Metal Oxide Film.
Semiconductors....TR: Transistor, DI: Diode, ZD: Zener Diode, VA: Varistor, TH: Thermistor.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
B	JK04241	IF SUB PWB	C227	0244105R	CD 2200PF +-10% 50V(B)
B001	JK04031B	V1 MAIN PWB	C229	0244171R	CD 10000PF +-10% 50V(F)
C001	0880009R	PF 0.01MF +-10% 50V	C232	0244171R	CD 10000PF +-10% 50V(F)
C002	0800048R	EL 100MF 10V(SME)	C233	0244171R	CD 10000PF +-10% 50V(F)
C003	0890089R	CD 0.0015MF +-10% 50V(B)	C234	0890076R	CD 150PF +-10% 50V(B)
C004	0880009R	PF 0.01MF +-10% 50V	C235	0890066R	CD 27PF +-10% 50V(SL)
C005	0880009R	PF 0.01MF +-10% 50V	C236	0244105R	CD 2200PF +-10% 50V(B)
C006	0800072R	EL 470MF 6.3V(SME)	C2A1	0244105R	CD 2200PF +-10% 50V(B)
C007	0800048R	EL 100MF 10V(SME)	C2A2	0890063R	CD 5PF +-10% 50V(SL)
C008	0890087R	CD 1000PF +-10% 50V(B)	C2A3	0244171R	CD 10000PF +-10% 50V (F)
C009	0890074R	CF 100PF +-10% 50V(SL)	C2A4	0244105R	CD 2200PF +-10% 50V(B)
C011	0800015R	EL 10MF 16V(SME)	C2A5	0244105R	CD 2200PF +-10% 50V(B)
C045	0800001R	EL 0.47MF 50V(SME)	C2A6	0244105R	CD 2200PF +-10% 50V(B)
C050	0800049R	EL 100MF 16V(SME)	C2A7	0244105R	CD 2200PF +-10% 50V(B)
C101	0800049R	EL 100MF 16V(SME)	C2A8	0244171R	CD 10000PF +-10% 50V(F)
C104	0800015R	EL 10MF 16V(SME)	C2B1	0244105R	CD 2200PF +-10% 50V(B)
C112	0800003R	EL 1MF 50V(SME)	C301	0244171R	CD 10000PF +-10% 50V(F)
C113	0244171R	CD 10000PF +-10% 50V(F)	C302	0244171R	CD 10000PF +-10% 50V(F)
C202	0244105R	CD 2200PF +-10% 50V(B)	C303	0800047R	EL 100MF 6.3V(SME)
C203	0244105R	CD 2200PF +-10% 50V(B)	C304	0800023R	EL 22MF 16V(SME)
C204	0880016R	PF 0.1MF +-10% 50V	C305	0800049R	EL 100MF 16V(SME)
C204A	0880016R	PF 0.1MF +-10% 50V(051/751/ 081S/PX-981 only)	C306	0244171R	CD 10000PF +-10% 50V(F)
			C307	0800073R	EL 470MF 10V(SME)
C208	0880009R	PF 0.01MF +-10% 50V(051/751/ 081S/PX-981 only)	C310	0800015R	EL 10MF 16V(SME)
			C311	0800333R	EL 220MF 6.3V(SMG)
C210	0244171R	CD 10000PF +-10% 50V(F)	C312	0800015R	EL 10MF 16V(SME)
C211	0800003R	EL 1MF 50V(SME)	C313	0800074N	EL 470MF 16V(SME)
C212	0800361F	EL 1000MF 16V(SMG)	C314	0880016R	PF 0.1MF +-10% 50V
C214	0880012R	PF 0.022MF +-10% 50V	C315	0800015R	EL 10MF 16V(SME)
C216	0880009R	PF 0.01MF +-10% 50V	C317	0244171R	CD 10000PF +-10% 50V(F)
C217	0880009R	PF 0.01MF +-10% 50V	C318	0880016R	PF 0.1MF +-10% 50V
C218	0244171R	CD 10000PF +-10% 50V(F)	C319	0244171R	CD 10000PF +-10% 50V(F)
C219	0244171R	CD 10000PF +-10% 50V(F)	C325	0800015R	EL 10MF 16V(SME)
C221	0244171R	CD 10000PF +-10% 50V(F)	C328	0800012R	EL 4.7MF 50V(SME)
C222	0244171R	CD 10000PF +-10% 50V(F)	C329	0800015R	EL 10MF 16V(SME)
C223	0800005R	EL 2.2MF 50V(SME)	C341	0800015R	EL 10MF 16V(SME)
C224	0880009R	PF 0.01MF +-10% 50V(Not for 051/751/081S/PX-981)	C342	0800015R	EL 10MF 16V(SME)
			C343	0800015R	EL 10MF 16V(SME)
C225	0800015R	EL 10MF 16V(SME)	C344	0800015R	EL 10MF 16V(SME)
C226	0800001R	EL 0.47MF 50V(SME)	C345	0800015R	EL 10MF 16V(SME)

制品安全上的注意: 在下表附带⚠标记的机件具备特别的安全特性。要替换这些机件以前请详细阅读这检修手册中“制品安全上的注意: 一书，以避免因检修不当而降低电视机的安全性。

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
C355	0800015R	EL 10MF 16V(SME)	C510	0800047R	EL 100MF 6.3V(SME)
C356	0800048R	EL 100MF 10V(SME)	C511	0244171R	CD 10000PF +-10% 50V(F)
C357	0800001R	EL 0.47MF 50V(SME)	C512	0880009R	PF 0.01MF +-10% 50V
C358	0244171R	CD 10000PF +-10% 50V(F)	C513	0246442R	CD 12PF +-10% 50V(CH)
C359	0244171R	CD 10000PF +-10% 50V(F)	C514	0880012R	PF 0.022MF +-10% 50V
C360	0244171R	CD 10000PF +-10% 50V(F)	C515	0880016R	PF 0.1MF +-10% 50V
C361	0244171R	CD 10000PF +-10% 50V(F)	C534	0800087F	EL 2200MF 16V(SME)
C380	0890068R	CD 39PF +-10% 50V(SL)	C610	0890087R	CD 1000PF +-10% 50V(B)
C384	0800049R	EL 100MF 16V(SME)	C611	0247848R	CD 56PF +-10% 500V(SL)
C398	0800015R	EL 10MF 16V(SME)	C612	0800052R	EL 100MF 35V(SME)
C399	0800015R	EL 10MF 16V(SME)	C613	0800015R	EL 10MF 16V(SME)
C405	0880009R	PF 0.01MF +-10% 50V(Not for 051/751/081S/PX-981)	C614	AN00626R	PF 0.015MF +-10% 50V
			C615	0880009R	PF 0.01MF +-10% 50V
C406	0244171R	CD 10000PF +-10% 50V(F)	C616	0880017R	PF 0.15MF +-10% 50V
C407	0244171R	CD 10000PF +-10% 50V(F)	C617	0800368F	EL 2200MF 25V(SMG)
C410	0800041R	EL 47MF 16V(SME)	C618	0800003R	EL 1MF 50V(SME)
C411	0800326R	EL 100MF 16V(SMG)	C619	0279693R	PF 0.1MF +-10% 100V
C412	0800327R	EL 100F 25V(SMG)	C623	0800041R	EL 47MF 16V(SME)
C413	0800326R	EL 100MF 16V(SMG)	C651	0880018R	PF 0.22MF +-10% 50V
C415	0880016R	PF 0.1MF +-10% 50V	C652	0880018R	PF 0.22MF +-10% 50V
C416	0880016R	PF 0.1MF +-10% 50V	C653	0880018R	PF 0.22MF +-10% 50V
C417	0800041R	EL 47MF 16V(SME)	C655	0800012R	EL 4.7MF 50V(SME)
C418	0800361N	EL 1000MF 16V(SMG)	C657	0880009R	PF 0.01MF +-10% 50V
C419	0800361N	EL 1000MF 16V(SMG)	C658	0800012R	EL 4.7MF 50V(SME)
C420	0255011F	EL 2200MF 35V(KME)	C659	AN00637R	PF 0.1MF +-10% 50V
C421	0880009R	PF 0.01MF +-10% 50V	C660	0880016R	PF 0.1MF +-10% 50V
C423	0880009R	PF 0.01MF +-10% 50V	C6A1	0800003R	EL 1MF 50V(SME)
C424	0284623R	EL 1MF 50V (SME)	C6A2	0292718F	TAT. CAP 2.2MF 20V
C426	0800005R	EL 2.2MF 50V(SME)	C6A3	0880016R	PF 0.1MF +-10% 50V
C429	0880045R	PF 0.012MF +-10% 50V	C6A4	0800003R	EL 1MF 50V(SME)
C430	0800352R	EL 470MF 10V(SMG)	C6A7	0890087R	CD 1000PF +-10% 50V(B)
C431	0800326R	EL 100MF 16V(SMG)	C706	0253862F	EL 220MF 160V
C434	0284623R	EL 1MF 50V (SME)	C715	0247850R	CD 68PF +-10% 500V(SL)
C435	0800005R	EL 2.2MF 50V(SME)	C716	0243507R	CD 330PF +-10% 500V(B)
C437	0800353R	EL 470MF 16V(SMG)	C717	0244505R	CD 2200PF +-10% 500V(B)
C438	0880045R	PF 0.012MF +-10% 50V	C718	0299918F	PF 0.022MF +-10% 200V
C439	0800003R	EL 1MF 50V(SME)	C719	0890081R	CD 330PF +-10% 50V(B)
C440	0800048R	EL 100MF 10V(SME)	C721	0880016R	PF 0.1MF +-10% 50V
C455	0800015R	EL 10MF 16V(SME)	C722	0800353R	EL 470MF 16V(SMG)
C468	0890087R	CD 1000PF +-10% 50V(B)	⚠ C723	0262416F	PF 0.0039MF +-10% 1.8KV
C473	0800015R	EL 10MF 16V(SME)	⚠ C725	0262801F	PF 0.56MF +-10% 250V
C501	0800003R	EL 1MF 50V(SME)	C726	0244501R	CD 1000PF +-10% 500V(B)
C502	0800003R	EL 1MF 50V(SME) (081S/PX-981 only)	C727	AN01069F	PF 0.012MF +-10% 1.8KV
			C728	0299720F	PF 0.015MF +-10% 630V
C503	0800003R	EL 1MF 50V(SME) (081S/PX-981 only)	C729	0299720F	PF 0.015MF +-10% 630V
			C730	0259474	EL 6.8MF 25V
C506	0880009R	PF 0.01MF +-10% 50V	C737	0284442	EL 2200MF 35V
C507	0800005R	EL 2.2MF 50V(SME)	C738	0243510R	CD 560PF +-10% 500V(B)
C508	0880016R	PF 0.1MF +-10% 50V	C739	0253974F	EL 33MF 250V
C509	0880016R	PF 0.1MF +-10% 50V	C740	0800051R	EL 100MF 25V(SME)

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SYMBOL NO.	PART NO.	DESCRIPTION
C741	0800021R	EL 10MF 100V(SME)
C742	0880009R	PF 0.01MF +-10% 50V
C743	0800361F	EL 1000MF 16V(SMG)
C744	0243510R	CD 560PF +-10% 500V(B)
C755	0800047R	EL 100MF 6.3V(SME)
C760	0800015R	EL 10MF 16V(SME)
C780	0890071R	CD 56PF +-10% 50V(SL)
⚠ C781	0244507R	CD 3300PF +-10% 500V(B)
⚠ C782	0249491F	CD 470PF +-10% 2.5KV(B)
C784	0800051R	EL 100MF 25V(SME)
C785	0800032R	EL 33MF 16V(SME)
C787	0800326R	EL 100MF 16V(SMG)
C7A1	0800058R	EL 220MF 16V(SME0
C7A2	0244171R	CD 10000PF +-10% 50V(F)
C7A3	0880009R	PF 0.01MF +-10% 50V
C7A4	0880009R	PF 0.01MF +-10% 50V
C7A5	0880009R	PF 0.01MF +-10% 50V
C7A6	0800003R	EL 1MF 50V(SME)
C801	0800317R	EL 47MF 16V(SMG)
C802	0244171R	CD 10000PF 50V
C804	0890084R	CD 560PF +-10% 50V
C805	0890084R	CD 560PF +-10% 50V
C806	0890084R	CD 560PF +-10% 50V
C807	0890082R	CD 390PF +-10% 50V(B)
C808	0890081R	CD 330PF +-10% 50V(B)
C809	0890082R	CD 390PF +-10% 50V(B)
C810	AL00027R	EL 4.7MF 250V
C811	0244889R	CD 2200PF +-10% 2KV(B)
C812	0244171R	CD 10000PF 50V
⚠ C901A	AN00144S	PF 0.1MF +-10% 250V
⚠ C902	AN00144S	PF 0.1MF +-10% 250V
C903	0248593F	CD 4700PF +-10% 250V(F)
C904	0248593F	CD 4700PF +-10% 250V(F)
C905	0248594F	CD 0.01MF +-10% 250V(F)
C906	AL00095	EL 330MF 450V
C907	0244215	CD 2200PF +-10% 2KV(R)
C908	0880009R	PF 0.01MF +-10% 50V
C909	0890075R	CD 120PF +-10% 50V(SL)
C910	0880005R	PF 0.0022MF +-10% 50V
C911	0270743R	PF 0.47MF +-10% 50V
C912	0880009R	PF 0.01MF +-10% 50V
C913	0270741R	PF 0.33MF +-10% 50V
C914	0800052R	EL 100MF 35V(SME)
C915	0880005R	PF 0.0022MF +-10% 50V
C916	0243507R	CD 330PF +-10% 500V(B)
C951	0244718	CD 330PF +-10% 2KV(B)
C952	0243507R	CD 330PF +-10% 500V(B)
C953	AL00911	EL 220MF 160V(KMF)
C954	0800368N	EL 2200MF 25V(SMG)
C956	0800051R	EL 100MF 25V(SME)
C957	0243509R	CD 470PF +-10% 500V(B)
C958	0880009R	PF 0.01MF +-10% 50V
C959	0800051R	EL 100MF 25V(SME)
C960	0800057R	EL 220MF 10V(SME)
C961	0800018R	EL 10MF 50V(SME)
⚠ C998	AJ00182F	CD 1000PF +80%-20% 250V
⚠ C999	AJ00184	CD 2200PF +80%-20% 250V
CE77	0800048R	EL 100MF 10V(051/751/081S/ PX-981 only)
CE82	0800048R	EL 100MF 10V(051/751/081S/ PX-981 only)
D001	2338321M	DI 1SS270
D002	CH00231A	LED SLH-56VC3F
D003	CH00232	LED SLH-56MC
D006	2338321M	DI 1SS270
D201	2338321M	DI 1SS270
D301	2338321M	DI 1SS270
D302	2338321M	DI 1SS270
D303	2338321M	DI 1SS270
D304	2338321M	DI 1SS270
D402	2333001M	DI RU2M
D403	2339885M	ZD HZS12B2
D404	2339885M	ZD HZS12B2
D405	2344041M	DI 1SS254/1SS270
D407	2339481M	DI AS01Z 200V
D408	2338321M	DI 1SS270
D414	2338321M	DI 1SS270
D415	2338321M	DI 1SS270
D514	2339869M	ZD HZS9C3
D515	2339869M	ZD HZS9C3
D516	2339869M	ZD HZS9C3
D610	CH00681M	DI 11ES2 200V
D611	2339231M	ZD HZS30-1L
D612	2339231M	ZD HZS30-1L
D613	2344041M	DI 1SS254/1SS270
D701	2348511	DI RS3FS
D703	2344071	DI ERC20M-04
D704	2359401	DI FMP-G12S
D705	2338902M	DI DFM1SA4
D706	CH00711M	DI 10ELS2
D707	2338902M	DI DFM1SA4
D709	2348511	DI RS3FS
D710	2344041M	DI 1SS254/1SS270
D741	CH00711M	DI 10ELS2
D742	2339885M	ZD HZS12B2
⚠ D746	2339212M	ZD HZS24-2L
D747	2335991M	ZD HZT33-02
D748	2339151M	ZD HZS12C1L
D749	2344041M	DI 1SS254/1SS270
D753A	2338321M	DI 1SS270

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
D758	2338321M	DI 1SS270			0.8UH
D807	2344041M	DI 1SS254/1SS270	FB902	2123468M	FERRITE CORE WITH LEAD
D808	2344041M	DI 1SS254/1SS270			0.8UH
D809	2344041M	DI 1SS254/1SS270	FB903	2123468M	FERRITE CORE WITH LEAD
D901	2338314	DI RBV-406M (LF-A)			0.8UH
D902	2338321M	DI 1SS270	FB904	2123462M	FERRITE CORE WITH LEAD
D903	2333001M	DI RU2M			0.8UH
D904	2337341M	DI 1SS270A (TP)	FB951	2123462M	FERRITE BEADS CORE B 2.3UH
D905	CH00711M	DI 10ELS2	FB952	2123462M	FERRITE BEADS CORE B 2.3UH
D906	2338321M	DI 1SS270	FB953	2123462M	FERRITE BEADS CORE B 2.3UH
D907	2337341M	DI 1SS270A	FB954	2123462M	FERRITE BEADS CORE B 2.3UH
D908	2333001	DI RU2M	FB998	2771892	FERRITE CORE WITH LEAD
D909	CH00711M	DI 10ELS2			0.8UH
D951	2349983	DI BYR 29F-600	I001	CP04801U	IC M37221MA-054SP
D952	2349991	DI BYW 29F-200	I002	CP03981	IC S24C08A
DE41	2339862M	ZD HZS9A2(051/751/081S/PX-981 only)	I003	CZ00461R	IC BMR-4201FT (RAD)
			I004	CP02411	IC K1A7805PI
DK054	2338321M	DI 1SS270	I201	CP03771	IC LA7566
DY	2444255	DY(NOT FOR 751)	I301	CP04971	IC MM1250XD
E001	2905241A	ADAPTOR	I401	CP01831	IC M62420SP
E003	2941311	BATTERY EVEREADY AA1015	I451	2004022	IC AN7147N
E201	2122652M	FERRITE CORE WITH LEAD	I501	CP03791U	IC TB1226AN
E2A1	ED00363	5P PIN POST	I601	CP03651	IC TA8427K
E2A2	ED00363	5P PIN POST	⚠ IC901	2917783	IC CNX82A 300
E301	2693884	6P JACK	IC951	CP04771	IC K1A7809PI
E302	2693853	TERMINAL BOARDS	J401	2672041	HEADPHONE JACK
E304	EU00582	TERMINAL BOARDS 3PIN JACK	L001	2123461M	FERRITE BEADS B 0.8 MH
E402	2723101J	2P PLUG PIN W/BASE	L002	2123461M	FERRITE BEADS B 0.8 MH
E403	2723102J	3P PLUG PIN W/BASE	L101	2123781R	PEAKING COIL 100MH
E502	2902269	10P CONNECTOR W/WIRE (081S/PX-981 only)	L201	2123415M	LAL AXIAL COIL 2.2MH +-10% (Not for 051/751/081S/PX-981)
E701	2665272	4P PLUG PIN W/BASE (UL)	L203	BH00614	VCO COIL 38.9MHZ
			L207	2123104M	LAL AXIAL COIL 12MH +-10%
⚠ E903	2972581A	POWER CORD(191/192/981 only)	L208	2123102M	LAL AXIAL COIL 8.2MH +-10%
⚠ E903	2972584/5	POWER CORD(041 only)	L209	2123103M	LAL AXIAL COIL 10MH +-10%
⚠ E903	2972591A	POWER CORD(433/081S only)	L210	2123461M	FERRITE BEADS B 0.8 MH
⚠ E903	EV00001	SAA POWER CORD(751 only)	L2A1	2123412M	LAL AXIAL COIL 1.2MH +-10%
⚠ E903	EV00071A	POWER CORD(051 only)	L2A2	2123415M	LAL AXIAL COIL 2.2MH +-10%
E904	2903544	4P PLUG PIN WITH BASE	L301	2123781R	PEAKING COIL 100MH-K
E905	EK00901	2J CONN. WIRE W/AMPIN	L302	2123781R	PEAKING COIL 100MH-K
E906L	2729252BR	FUSE HOLDER	L303	2123763R	COIL EL0405 100MH-K
E906R	2729252BR	FUSE HOLDER	L304	2123781R	PEAKING COIL 100MH-K
E907	2903547	1P PLUG PIN WITH BASE	L380	2122949M	LAL AXIAL COIL 33MH +-10%
E951	2903547	1P PLUG PIN WITH BASE	L405	2123461M	FERRITE BEADS B 0.8 MH
EB	2776242A	CF MAGNET	L501	2123781R	PEAKING COIL 100MH-K
⚠ ECPT	2698673	CRT SOCKET	L611	2123461M	FERRITE BEADS B 0.8 MH
EY1	2964961	5J RIBBON WIRE WITH BOARD IN	L6A1	2123781R	PEAKING COIL 100MH-K
EY2	EF01672	CONNECTOR	L701	2124183	CHOKE COIL
⚠ F901	2721615	FUSE 3.15A	L702	BZ01351	H. LINERARITY COIL(27MH)
FB901	2123468M	FERRITE CORE WITH LEAD	L703	2125763R	RADIAL COIL 27MH

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SYMBOL NO.	PART NO.	DESCRIPTION
L704	BH00206R	FIXED COIL 27MH
L705	2123461M	FERRITE BEADS B 0.8 MH
L7A1	2123781R	PEAKING COIL 100MH-K
⚠ L901	BZ02121	LINE FILTER
⚠ L902	BZ02122	LINE FILTER(041/433/751 only)
L903	BH00737R	INDUCTANCE COIL 180MH
⚠ L905	2276063	DEGAUSSING COIL
L951	BH00734R	PEAKING COIL 100 MH-K
L952	BH00734R	PEAKING COIL 100 MH-K
LE13	2123461M	FERRITE BEADS B 0.8 MH (051/751/081S/PX981 only)
LE16	2123781R	PEAKING COIL 100MH-K (051/751/081S/PX981 only)
LE39	2123103M	LAL AXIAL COIL 10MH +-10% (051/751/081S/PX981 only)
LE40	2123103M	LAL AXIAL COIL 10MH +-10% (051/751/081S/PX981 only)
PCPT2	2903547	1P PLUG PIN WITH BASE
⚠ PR901	AZ00102M	1A PROTECTOR
⚠ PR951	AZ00106M	3A PROTECTOR
Q001	2327773M	TRS. 2SC3413C/D
Q002	2327773M	TRS. 2SC3413C/D
Q204	2327752M	TRS. 2SA1390 B/C
Q205	2326872R	TRS. DTC114ES
Q206	2326872R	TRS. DTC114ES
Q2A1	2326872R	TR DTC114ES
Q2A2	2320144M	TRS 2SC1906
Q2A3	2320144M	TRS 2SC1906
Q301	2327773M	TRS. 2SC3413C/D
Q302	2326872R	TRS. DTC114ES
Q303	2327752M	TRS. 2SA1390 B/C
Q305	2327753M	TRS. 2SA1390 C/D
Q307	2327773M	TRS. 2SC3413C/D
Q401	2327773M	TRS. 2SC3413C/D(Not for 051 751/081/PX-981)
Q402	2327773M	TRS. 2SC3413C/D(051/751/ 081S/PX-981 only)
Q408	2327753M	TRS. 2SA1390 C/D
Q409	2327773M	TRS. 2SC3413C/D
Q410	2327773M	TRS. 2SC3413C/D
Q501	2326873R	TRS. DTC144ES
Q604	CF01431R	TRS. KTA 1266Y
Q661	2315933	TRS. 2SB1548A-P/Q
Q662	2323522M	TRS. 2SD789E
Q663	2327753M	TRS. 2SA1390 C/D
Q664	2327773M	TRS. 2SC3413C/D
Q665	2327773M	TRS. 2SC3413C/D
Q666	2327773M	TRS. 2SC3413C/D
Q708	2315451	TRS. BU2508AF
Q709	2326216	TRS. 2SC3116 S/T
Q722	2312171	TRS. 2SC3852
Q723	2312171	TRS. 2SC3852
Q724	CF01431R	TRS. KTA 1266Y
Q740	CF01421R	TRS. KTC3198 GR
Q741	2321112M	TRS. 2SA778AK-02
⚠ Q755	CJ00161R	TRS. BT149-B
Q801	CF00951	TRS. KTC 3229
Q802	CF00951	TRS. KTC 3229
Q803	CF00951	TRS. KTC 3229
Q804	2320663M	TRS. 2SC1213AC
Q805	2320663M	TRS. 2SC1213AC
Q806	2320663M	TRS. 2SC1213AC
Q901	CF01431R	TRS. KTA 1266Y
Q902	CF01221	TRS. BD329
Q903	2314792	TRS. BUT12AF/ON4959
Q904	CF01421R	TRS. KTC3198 GR
Q905	CF01831	TRS. KTD2058Y
Q951	CF01821R	TRS. KTC3206Y
Q952	CF01421R	TRS. KTC3198 GR
Q953	CF01851	TRS. KTA 1658Y
Q954	CF01421R	TRS. KTC3198 GR
⚠ Q956	CF01421R	TRS. KTC3198 GR
Q957	CF01851	TRS. KTA 1658Y
Q958	CF01421R	TRS. KTC3198 GR
R001	0700056M	CF 15K OHM +-5% 1/16W
R002	0700041M	CF 1K OHM +-5% 1/16W
R003	0700051M	CF 5.6K OHM +-5% 1/16W
R004	0700054M	CF 10K OHM +-5% 1/16W
R005	0700055M	CF 12K OHM +-5% 1/16W
R006	0700041M	CF 1K OHM +-5% 1/16W
R007	0700043M	CF 1.5K OHM +-5% 1/16W
R009	0700054M	CF 10K OHM +-5% 1/16W
R010	0700043M	CF 1.5K OHM +-5% 1/16W
R011	0700058M	CF 22K OHM +-5% 1/16W
R012	0700054M	CF 10K OHM +-5% 1/16W
R013	0700058M	CF 22K OHM +-5% 1/16W
R014	0700054M	CF 10K OHM +-5% 1/16W
R015	0700045M	CF 2.2K OHM +-5% 1/16W
R016	0700027M	CF 100 OHM +-5% 1/16W
R017	0700047M	CF 3.3K OHM +-5% 1/16W
R018	0700041M	CF 1K OHM +-5% 1/16W
R019	0700041M	CF 1K OHM +-5% 1/16W
R020	0700053M	CF 8.2K OHM +-5% 1/16W
R021	0700041M	CF 1K OHM +-5% 1/16W
R022	0700054M	CF 10K OHM +-5% 1/16W
R023	0700062M	CF 39K OHM +-5% 1/16W
R024	0700062M	CF 39K OHM +-5% 1/16W
R025	0700067M	CF 100K OHM +-5% 1/16W
R026	0700067M	CF 100K OHM +-5% 1/16W
R027	0700056M	CF 15K OHM +-5% 1/16W

制品安全上的注意: 在下表附带⚠标记的机件具备特别的安全特性。要替换这些机件以前请详细阅读这检修手册中“制品安全上的注意: 一书, 以避免因检修不当而降低电视机的安全性。

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R028	0700051M	CF 5.6K OHM +-5% 1/16W	R238	0700039M	CF 820 OHM +-5% 1/16W
R029	0700041M	CF 1K OHM +-5% 1/16W	R240	0700038M	CF 680 OHM +-5% 1/16W
R031	0700058M	CF 22K OHM +-5% 1/16W	R264	0700041M	CF 1K OHM +-5% 1/16W
R032	0700041M	CF 1K OHM +-5% 1/16W	R265	0700047M	CF 3.3K OHM +-5% 1/16W
R033	0700056M	CF 15K OHM +-5% 1/16W	R266	0700054M	CF 10K OHM +-5% 1/16W
R034	0700027M	CF 100 OHM +-5% 1/16W	R267	0700063M	CF 47K OHM +-5% 1/16W
R035	0700027M	CF 100 OHM +-5% 1/16W	R268	0700061M	CF 33K OHM +-5% 1/16W
R036	0700041M	CF 1K OHM +-5% 1/16W	R2A1	0700014M	CF 10 OHM +-5% 1/16W
R037	0700041M	CF 1K OHM +-5% 1/16W	R2A2	0700025M	CF 68 OHM +-5% 1/16W
R038	0700041M	CF 1K OHM +-5% 1/16W	R2A3	0700058M	CF 22K OHM +-5% 1/16W
R039	0700027M	CF 100 OHM +-5% 1/16W	R2A4	0700023M	CF 47 OHM +-5% 1/16W
R040	0700027M	CF 100 OHM +-5% 1/16W	R2A5	0700045M	CF 2.2K OHM +-5% 1/16W
R042	0700041M	CF 1K OHM +-5% 1/16W	R2A6	0700051M	CF 5.6K OHM +-5% 1/16W
R043	0700046M	CF 2.7K OHM +-5% 1/16W	R2A7	0700044M	CF 1.8K OHM +-5% 1/16W
R044	0700046M	CF 2.7K OHM +-5% 1/16W	R2A8	0700037M	CF 560 OHM +-5% 1/16W
R045	0700046M	CF 2.7K OHM +-5% 1/16W	R2A9	0700016M	CF 15 OHM +-5% 1/16W
R046	0700046M	CF 2.7K OHM +-5% 1/16W	R2B1	0700027M	CF 100 OHM +-5% 1/16W
R047	0700046M	CF 2.7K OHM +-5% 1/16W	R2B2	0114135M	CF 150 OHM +-5% 1/4W
R048	0700046M	CF 2.7K OHM +-5% 1/16W	R2B3	0700051M	CF 5.6K OHM +-5% 1/16W
R050	0700043M	CF 1.5K OHM +-5% 1/16W	R2B4	0700045M	CF 2.2K OHM +-5% 1/16W
R051	0700043M	CF 1.5K OHM +-5% 1/16W	R2B5	0700014M	CF 10 OHM +-5% 1/16W
R052	0700051M	CF 5.6K OHM +-5% 1/16W	R2B6	0700027M	CF 100 OHM +-5% 1/16W
R053	0700051M	CF 5.6K OHM +-5% 1/16W	R2B7	0700032M	CF 220 OHM +-5% 1/16W(051/751/081S/PX-981 only)
R055	0700041M	CF 1K OHM +-5% 1/16W			
R056	0700041M	CF 1K OHM +-5% 1/16W	R2B7	0700037M	CF 560 OHM +-5% 1/16W (Not for 051/751/081S/PX-981)
R057	0700051M	CF 5.6K OHM +-5% 1/16W			
R078	0700067M	CF 100K OHM +-5% 1/16W	R2B8	0114135M	CF 150 OHM +-5% 1/4W
R101	0700027M	CF 100 OHM +-5% 1/16W	R2C1	0150306	VR 20K OHM(Not for 051/751/751/081S/PX-981)
R102	0700027M	CF 100 OHM +-5% 1/16W			
R205	0700045M	CF 2.2K OHM +-5% 1/16W	R2C1	AW00131	VR 100K OHM(051/751/081S/PX981)
R208	0700041M	CF 1K OHM +-5% 1/16W			
R209	0700065M	CF 68K OHM +-5% 1/16W	R302	0100038M	CF 75 OHM +-5% 1/8W
R213	0700037M	CF 560 OHM +-5% 1/16W	R303	0100041M	CF 100 OHM +-5% 1/8W
R214	0700056M	CF 15K OHM +-5% 1/16W	R304	0100113M	CF 100K OHM +-5% 1/8W
R216	0700045M	CF 2.2K OHM +-5% 1/16W	R305	0100041M	CF 100 OHM +-5% 1/8W
R217	0700045M	CF 2.2K OHM +-5% 1/16W	R306	0100105M	CF 47K OHM +-5% 1/8W
R218	0700054M	CF 10K OHM +-5% 1/16W	R307	0100041M	CF 100 OHM +-5% 1/8W
R219	0700027M	CF 100 OHM +-5% 1/16W(051/ /751/081S/PX-981 only)	R308	0100041M	CF 100 OHM +-5% 1/8W
			R309	0100045M	CF 150 OHM +-5% 1/8W
R221	0700031M	CF 180 OHM +-5% 1/16W	R310	0700027M	CF 100 OHM +-5% 1/16W
R223	0700063M	CF 47K OHM +-5% 1/16W	R312	0100113M	CF 100K OHM +-5% 1/8W
R224	0700037M	CF 560 OHM +-5% 1/16W	R313	0100041M	CF 100 OHM +-5% 1/8W
R225	0700041M	CF 1K OHM +-5% 1/16W	R314	0100105M	CF 47K OHM +-5% 1/8W
R226	0700062M	CF 39K OHM +-5% 1/16W	R315	0100041M	CF 100 OHM +-5% 1/8W
R227	0700033M	CF 270 OHM +-5% 1/16W	R318	0100038M	CF 75 OHM +-5% 1/8W
R228	0700037M	CF 560 OHM +-5% 1/16W	R319	0100041M	CF 100 OHM +-5% 1/8W
R229	0700036M	CF 470 OHM +-5% 1/16W	R320	0100113M	CF 100K OHM +-5% 1/8W
R234	0700041M	CF 1K OHM +-5% 1/16W	R321	0700058M	CF 22K OHM +-5% 1/16W
R235	0700037M	CF 560 OHM +-5% 1/16W	R322	0700056M	CF 15K OHM +-5% 1/16W
R237	0187058M	CF 510 OHM +-5% 1/16W	R324	0100129M	CF 470K OHM +-5% 1/8W

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R326	0100129M	CF 470K OHM +-5% 1/8W	R483	0700067M	CF 100K OHM +-5% 1/16W
R329	0700049M	CF 4.7K OHM +-5% 1/16W	R484	0700051M	CF 5.6K OHM +-5% 1/16W
R330	0700027M	CF 100 OHM +-5% 1/16W	R486	0700027M	CF 100 OHM +-5% 1/16W
R335	0700054M	CF 10K OHM +-5% 1/16W	R487	0700027M	CF 100 OHM +-5% 1/16W
R340	0700027M	CF 100 OHM +-5% 1/16W	R488	0700051M	CF 5.6K OHM +-5% 1/16W
R341	0700027M	CF 100 OHM +-5% 1/16W	R489	0700034M	CF 330 OHM +-5% 1/16W
R342	0700027M	CF 100 OHM +-5% 1/16W	R492	0100063M	CF 820 OHM +-5% 1/8W
R343	0100041M	CF 100 OHM +-5% 1/8W	R493	0100063M	CF 820 OHM +-5% 1/8W
R344	0100041M	CF 100 OHM +-5% 1/8W	R494	0700041M	CF 1K OHM +-5% 1/16W
R345	0100041M	CF 100 OHM +-5% 1/8W	R495	0700041M	CF 1K OHM +-5% 1/16W
R348	0700027M	CF 100 OHM +-5% 1/16W	R496	0700034M	CF 330 OHM +-5% 1/16W
R349	0700027M	CF 100 OHM +-5% 1/16W	R499	0147126	WW 2.2 OHM +-5% 3W
R350	0700027M	CF 100 OHM +-5% 1/16W	R502	0700027M	CF 100 OHM +-5% 1/16W
R354	0700036M	CF 470 OHM +-5% 1/16W	R504	0100041M	CF 100 OHM +-5% 1/8W
R355	0100038M	CF 75 OHM +-5% 1/8W	R505	0100041M	CF 100 OHM +-5% 1/8W
R373	0119514S	FR 10 OHM +-5% 1/4W	R506	0100041M	CF 100 OHM +-5% 1/8W
R374	0100122M	CF 240K OHM +-5% 1/8W	R507	0700027M	CF 100 OHM +-5% 1/16W
R380	0700044M	CF 1.8K OHM +-5% 1/16W	R508	0700045M	CF 2.2K OHM +-5% 1/16W
R381	0700032M	CF 220 OHM +-5% 1/16W	R509	0700045M	CF 2.2K OHM +-5% 1/16W
R382	0100059M	CF 560 OHM +-5% 1/8W	R510	0700045M	CF 2.2K OHM +-5% 1/16W
R390	0700036M	CF 470 OHM +-5% 1/16W	R512	0700041M	CF 1K OHM +-5% 1/16W
R391	0700036M	CF 470 OHM +-5% 1/16W	R514	0700041M	CF 1K OHM +-5% 1/16W
R392	0100053M	CF 330 OHM +-5% 1/8W	R516	0700041M	CF 1K OHM +-5% 1/16W
R3A1	0700045M	CF 2.2K OHM +-5% 1/16W	R517	0700041M	CF 1K OHM +-5% 1/16W
R401	0700027M	CF 100 OHM +-5% 1/16W (Not for 051/751/081S/PX-981)	R518	0700041M	CF 1K OHM +-5% 1/16W
R403	0700041M	CF 1K OHM +-5% 1/16W (Not for 051/751/081S/PX-981)	R519	0700054M	CF 10K OHM +-5% 1/16W
R404	0700034M	CF 330 OHM +-5% 1/16W (Not for 051/751/081S/PX-981)	R520	0700027M	CF 100 OHM +-5% 1/16W
R405	0700034M	CF 330 OHM +-5% 1/16W (Not for 051/751/081S/PX-981)	R521	0700027M	CF 100 OHM +-5% 1/16W
R406	0700034M	CF 330 OHM +-5% 1/16W (Not for 051/751/081S/PX-981)	R522	0700027M	CF 100 OHM +-5% 1/16W
R407	0700034M	CF 330 OHM +-5% 1/16W (Not for 051/751/081S/PX-981)	R533	0700027M	CF 100 OHM +-5% 1/16W
R408	0700041M	CF 1K OHM +-5% 1/16W (Not for 051/751/081S/PX-981)	R534	0700027M	CF 100 OHM +-5% 1/16W
R409	0110337S	MF 470 OHM +-5% 3W	R535	0700044M	CF 1.8K OHM +-5% 1/16W
R410	0700042M	CF 1.2K OHM +-5% 1/16W	R536	0700027M	CF 100 OHM +-5% 1/16W(081S/ PX-981 Only)
R411	0700042M	CF 1.2K OHM +-5% 1/16W	R537	0700027M	CF 100 OHM +-5% 1/16W(081S/ PX-981 Only)
R412	0119505G	FR 2.2 OHM +-5% 1/4W	R554	0700036M	CF 470 OHM +-5% 1/16W
R413	0119505G	FR 2.2 OHM +-5% 1/4W	R555	0700054M	CF 10K OHM +-5% 1/16W(Not for 081S/PX-981)
R414	0700064M	CF 56K OHM +-5% 1/16W	R611	0700048M	CF 3.9K OHM +-5% 1/16W
R415	0700048M	CF 3.9K OHM +-5% 1/16W	R612	0700051M	CF 5.6K OHM +-5% 1/16W
R416	0700048M	CF 3.9K OHM +-5% 1/16W	R613	0700067M	CF 100K OHM +-5% 1/16W
R417	0700041M	CF 1K OHM +-5% 1/16W	R614	0700066M	CF 82K OHM +-5% 1/16W
R418	0700041M	CF 1K OHM +-5% 1/16W	R615	0188123M	CF 270 OHM +-5% 1/2W
R480	0119514S	FR 10 OHM +-5% 1/4W	R617	0100127M	CF 390K OHM +-5% 1/8W
R481	0114141M	CF 270 OHM +-5% 1/4W	R618	0700061M	CF 33K OHM +-5% 1/16W
			R621	0119722M	FR 1.0 OHM +-5% 1W
			R631	0700058M	CF 22K OHM +-5% 1/16W
			R632	0119722M	FR 1.0 OHM +-5% 1W
			R633	0700054M	CF 10K OHM +-5% 1/16W

制品安全上的注意: 在下表附带⚠标记的机件具备特别的安全特性。要替换这些机件以前请详细阅读这检修手册中 "制品安全上的注意: 一书，以避免因检修不当而降低电视机的安全性。

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R651	0188135M	CF 2.2K OHM +-5% 1/2W	R772	0110243S	MF 820 OHM +-5% 2W
R653	0700046M	CF 2.7K OHM +-5% 1/16W	R780	0110159S	MF 3.9K OHM +-5% 1W
R654	0700067M	CF 100K OHM +-5% 1/16W	R781	0110285S	MF 47K OHM +-5% 2W
R655	0700045M	CF 2.2K OHM +-5% 1/16W	R782	0100065M	CF 1K OHM +-5% 1/8W
R656	0150265	VR 10K OHM(B)	R784	0147825	WW 5.6K OHM +-5% 15W
R657	0150265	VR 10K OHM(B)	R785	0700044M	CF 1.8K OHM +-5% 1/16W
R658	0700054M	CF 10K OHM +-5% 1/16W	R786	0100105M	CF 47K OHM +-5% 1/8W
R659	0700054M	CF 10K OHM +-5% 1/16W	R787	0700067M	CF 100K OHM +-5% 1/16W
R660	0700063M	CF 47K OHM +-5% 1/16W	R791	0700054M	CF 10K OHM +-5% 1/16W
R661	0700049M	CF 4.7K OHM +-5% 1/16W	R794	0100101M	CF 33K OHM +-5% 1/8W
R662	0700059M	CF 27K OHM +-5% 1/16W	R796	0700072M	CF 220K OHM +-5% 1/16W
R663	0179561M	MF 2.2M OHM +-5% 1/8W	R797	0700055M	CF 12K OHM +-5% 1/16W
R664	0700054M	CF 10K OHM +-5% 1/16W	R7A1	0700038M	CF 680 OHM +-5% 1/16W
R665	0700054M	CF 10K OHM +-5% 1/16W	R7A2	0700031M	CF 180 OHM +-5% 1/16W
R666	0700041M	CF 1K OHM +-5% 1/16W	R7A3	0700054M	CF 10K OHM +-5% 1/16W
R668	0700067M	CF 100K OHM +-5% 1/16W	R7A4	0100113M	CF 100K OHM +-5% 1/8W
R669	0700053M	CF 8.2K OHM +-5% 1/16W	R7A5	0700053M	CF 8.2K OHM +-5% 1/16W
R670	0700061M	CF 33K OHM +-5% 1/16W	R7A7	0700056M	CF 15K OHM +-5% 1/16W
R671	0100119M	CF 180K OHM +-5% 1/8W	R801	0100041M	CF 100 OHM +-5% 1/8W
R672	0700059M	CF 27K OHM +-5% 1/16W	R802	0100041M	CF 100 OHM +-5% 1/8W
R673	0700063M	CF 47K OHM +-5% 1/16W	R803	0100041M	CF 100 OHM +-5% 1/8W
R676	0700041M	CF 1K OHM +-5% 1/16W	R804	0110267S	MF 8.2K OHM +-5% 2W
R677	0700041M	CF 1K OHM +-5% 1/16W	R805	0110267S	MF 8.2K OHM +-5% 2W
R6A1	0700045M	CF 2.2K OHM +-5% 1/16W	R806	0110267S	MF 8.2K OHM +-5% 2W
R6A2	0700041M	CF 1K OHM +-5% 1/16W	R807	0113744M	CF 560 OHM +-5% 1/2W
R720	0110201S	MF 15 OHM +-5% 2W	R808	0113744M	CF 560 OHM +-5% 1/2W
R721	0110211S	MF 39 OHM +-5% 2W	R809	0113744M	CF 560 OHM +-5% 1/2W
R722	0100057M	CF 470 OHM +-5% 1/8W	R810	0100069M	CF 1.5K OHM +-5% 1/8W
R723	0100049M	CF 220 OHM +-5% 1/8W	R811	0100069M	CF 1.5K OHM +-5% 1/8W
R724	0700041M	CF 1K OHM +-5% 1/16W	R812	0100069M	CF 1.5K OHM +-5% 1/8W
R725	0700054M	CF 10K OHM +-5% 1/16W	R813	0100047M	CF 180 OHM +-5% 1/8W
R727	0700054M	CF 10K OHM +-5% 1/16W	R814	0100047M	CF 180 OHM +-5% 1/8W
R732	0145051S	WW 2.7K OHM +-5% 7W	R815	0100047M	CF 180 OHM +-5% 1/8W
R735	0119688M	FR 0.22 OHM +-5% 1W	R816	0188166M	CF 470K OHM +-5% 1/2W
R736	0700026M	CF 82 OHM +-5% 1/16W	R901	0147610A	WW 1.0 OHM +-5% 7W
R737	0114145M	CF 390 OHM +-5% 1/4W	R901A	0147610A	WW 1.0 OHM +-5% 7W
R738	0188142M	CF 6.8K OHM +-5% 1/2W	R902	0113791M	CF 47K OHM +-5% 1/2W
R741	0100093M	CF 15K OHM +-5% 1/8W	R903	0113787M	CF 33K OHM +-5% 1/2W
R742	0114207M	CF 18K OHM +-5% 1/4W	R904	0100085M	CF 6.8K OHM +-5% 1/8W
⚠ R743	AZ00026M	2.5A PROTECTOR	R905	0147582A	WW 560 OHM +-5% 5W
⚠ R744	AZ00026M	2.5A PROTECTOR	R906	0147670A	WW 330 OHM +-5% 7W
⚠ R748	AZ00026M	2.5A PROTECTOR	R907	0147072BF	WW 100 OHM +-5% 2W
⚠ R749	0114213M	CF 33K OHM +-5% 1/4W	R908	0100089M	CF 10K OHM +-5% 1/8W
⚠ R750	0700058M	CF 22K OHM +-5% 1/16W	R909	0700061M	CF 1/16 33K OHM +-5% 1/16W
R751	0700032M	CF 220 OHM +-5% 1/16W	R910	0113733	CF 220 OHM +-5% 1/2W
R754	0114163M	CF 1.2K OHM +-5% 1/4W	R911	0110129S	MF 220 OHM +-5% 1W
⚠ R755	0700039M	CF 820 OHM +-5% 1/16W	R912	0114131M	CF 100 OHM +-5% 1/4W
R760	0700063M	CF 47K OHM +-5% 1/16W	R913	0700032M	CF 220 OHM +-5% 1/16W
R760A	0100093M	CF 15K OHM +-5% 1/8W	R914	0147126BF	WW 2.2 OHM +-5% 3W
R768	0188117M	CF 270 OHM +-5% 1/2W			

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SYMBOL NO.	PART NO.	DESCRIPTION
R915	0114171M	CF 2.7K OHM +-5% 1/4W
R916	0114163M	CF 1.2K OHM +-5% 1/4W
R917	0100041M	CF 100 OHM +-5% 1/8W
R918	0110129S	MF 220 OHM +-5% 1W
R920	0147662A	WW 150 OHM +-5% 7W
R940	0110217S	MF 68 OHM +-5% 2W
R953	0700043M	CF 1.5K OHM +-5% 1/16W
R957	0113756M	CF 1.8K OHM +-5% 1/2W
R958	0700049M	CF 4.7K OHM +-5% 1/16W
R959	0700049M	CF 4.7K OHM +-5% 1/16W
R960	0700049M	CF 4.7K OHM +-5% 1/16W
R961	0700049M	CF 4.7K OHM +-5% 1/16W
R962	0113791M	CF 47K OHM +-5% 1/2W
R964	0100075M	CF 2.7K OHM +-5% 1/8W
R965	0700048M	CF 3.9K OHM +-5% 1/16W
R966	0113791M	CF 47K OHM +-5% 1/2W
R967	0110255S	MF 2.7K OHM +-5% 2W
R968	0110237S	MF 470 OHM +-5% 2W
R969	0700054M	CF 10K OHM +-5% 1/16W
R970	0700049M	CF 4.7K OHM +-5% 1/16W
R971	0113742M	CF 470 OHM +-5% 1/2W
⚠ R998	0174704	MF 10M OHM +-5% 1W
RE01	0700042M	CF 1.2K OHM +-5% 1/16W (Not for 051/751/081S/PX-981)
RE02	0700044M	CF 1.8K OHM +-5% 1/16W (Not for 051/751/081S/PX-981)
RE37	0700027M	CF 100 OHM +-5% 1/16W (051/751/081S/PX-981 only)
RE38	0700027M	CF 100 OHM +-5% 1/16W (051/751/081S/PX-981 only)
RE41	0110203S	MF 18 OHM +-5% 2W(051/751/ 081S/PX-981 only)
RK155	0700027M	CF 100 OHM +-5% 1/16W(081S/ PX-981 only)
S001	FE00281	TACT SW
S002	FE00281	TACT SW
⚠ S901	2634731	MAIN SWITCH
SP401	GM00321	SPEAKER BOX
SP402	GM00321	SPEAKER BOX
T701	BS00011	H.DRIVE TRANSFORMER
⚠ T702	BW00444	V1 FBT (29")
⚠ T901	BT00952	SWITCHING TRANSFORMER
TH61	2340371	THERMISTOR 112301-9
⚠ TH901	CJ00131	PTC THERMISTOR
U001	HJ00133	TUNER UNIT BTP-AH452
U1001	HL00871	R/C TRANSMITTER CLE-925
U404	HP00452	A2 UNIT(751 only)
U404	HP00453	NICAM/A2 UNIT(051/081S/ PX-981 only)
⚠ V1	2471562	CRT A68KSA30X
V1	DE01105	CRT A68AGA25X (751 Only)
VR951	AW00101	VR 500 OHM(B)
X001	2574762A	R/C RECEIVER
X002	2168371	X'TAL 6MHZ
X003	2791754R	LC FILTER
X004	2791754R	LC FILTER
X201	BG00671	SAW FILTER K6262K
X204	2167371	CER TRAP COIL 5.5/5.74MHZ
X205	2143472	COMPOSITE TRAP 6.0/6.5MHZ
X206	2142241	CERAMIC TRAP TPS 4.5MHZ B4
X208	BJ00271	FILTER SAF33.4MCB70Z
X2A1	BN00081	CERAMIC FILTER 31.9 MHZ
X401	2167311B	CERAMIC FILTER 4.5MHZ (Not for 051/751/081S/PX-981)
X402	2167211B	CERAMIC FILTER 5.5MHZ (Not for 051/751/081S/PX-981)
X403	2167212B	CERAMIC FILTER 6.0MHZ (Not for 051/751/081S/PX-981)
X404	2167213B	CERAMIC FILTER 6.5MHZ (Not for 051/751/081S/PX-981)
X501	BP00661	X'TAL 16.2MHZ
ZD721	2339854M	ZD HZS7B1
ZD752	2339843M	ZD HZS6A3
ZD753	2339867	ZD HZS9C1
ZD901	2339834M	ZD HZS5B1
ZD902	2339825M	ZD HZS4B2
ZD903	2331795M	ZD HZ5B2
ZD904	2331795M	ZD HZ5B2
ZD905	2339842M	ZD HZS6A2
ZD906	2339867M	ZD HZS9C1
ZD910	2331795	ZD HZ5B2
ZD951	2339854M	ZD HZS7B1
ZD952	2339222M	ZD HZS27-2L
ZD953	2339847M	ZD HZS6C1
ZD954	2339221M	ZDZS27-1L

THE FOLLOWING PART LIST FOR TELETEXT PWB ONLY (081S/PX-981 ONLY)

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ABBREVIATIONS Capacitors.....CD: Ceramic Disk, PF: Polyester Film, EL: Electrolytic, PP: Polypropylene, PR: Paper, TA: Tantalum, TM: Trimer.
Resistors.....CF: Carbon film, WW: Wire Wound, FR: Fuse Resistor, MG: Metal Glazed, VR: Variable Resistor, CC: Carbon Composition, MF: Metal Oxide Film.
Semiconductors....TR: Transistor, DI: Diode, ZD: Zener Diode, VA: Varistor, TH: Thermistor.

SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
B001	JK00692C	T/TEXT SUB PWB	Q006	CF00875R	TR 2SC5343 Y/G
B5201	JK00072	S2 T/TEXT PWB	Q007	CF00865R	TR 2SA1980 Y/G
C002	0890077R	CD 180PF +-10% 50V(B)	Q008	CF00875R	TR 2SC5343 Y/G
C003	0800048R	EL 100MF 10V(SME)	Q5201	CF00875R	TR 2SC5343 Y/G
C006	0800001R	EL 0.47MF 50V(SME)	R001	0700029M	CF 150 OHM +-5% 1/16W
C007	0880016R	PF 0.1MF +-10% 50V	R002	0700029M	CF 150 OHM +-5% 1/16W
C008	0880044R	PF 0.01MF +-10% 50V	R003	0700034M	CF 330 OHM +-5% 1/16W
C009	0800049R	EL 100MF 16V(SME)	R004	0700049M	CF 4.7K OHM +-5% 1/16W
C010	0800047R	EL 100MF 6.3V(SME)	R005	0700047M	CF 3.3K OHM +-5% 1/16W
C020	0890087R	CD 0.001MF +-10% 50V(B)	R006	0700024M	CF 56 OHM +-5% 1/16W
C5200	0238296	CEE PLUG PIN	R007	0700041M	CF 1K OHM +-5% 1/16W
C5201	0800048R	EL 100MF 10V(SME)	R008	0700041M	CF 1K OHM +-5% 1/16W
C5201	0800143	EL 100MF 6.3V	R009	0700041M	CF 1K OHM +-5% 1/16W
C5202	0270734R	PF 0.1MF +-5% 50V	R012	0700027M	CF 100 OHM +-5% 1/16W
C5203	0880003R	PF 0.001MF +-10% 50V	R015	0700027M	CF 100 OHM +-5% 1/16W
C5204	0890063R	CD 15PF +-5% 50V(SL)	R016	0700027M	CF 100 OHM +-5% 1/16W
C5205	0890061R	CD 10PF+-5% 50V(SL)	R017	0700027M	CF 100 OHM +-5% 1/16W
C5206	0270734R	PF 0.1MF +-5% 50V	R018	0700024M	CF 56 OHM +-5% 1/16W
C5207	0270734R	PF 0.1MF +-5% 50V	R019	0700034M	CF 330 OHM +-5% 1/16W
C5208	0270734R	PF 0.1MF +-5% 50V	R020	0700032M	CF 220 OHM +-5% 1/16W
C5209	0270734R	PF 0.1MF +-5% 50V	R021	0700032M	CF 220 OHM +-5% 1/16W
C5210	0890118R	CD 22PF +-5% 50V(CH)	R022	0700054M	CF 10K OHM +-5% 1/16W
C5211	0890118R	CD 22PF +-5% 50V(CH)	R023	0700054M	CF 10K OHM +-5% 1/16W
C5222	0270734R	PF 0.1MF +-5% 50V	R030	0700032M	CF 220 OHM +-5% 1/16W
C5299	0270741R	PF 0.33MF +-5% 50V	R031	0700043M	CF 1.5K OHM +-5% 1/16W
D019	2338321M	DI 1SS270	R032	0700029M	CF 150 OHM +-5% 1/16W
E001	2902269	10P MINI PLUG PIN WITH BASE	R033	0700027M	CF 100 OHM +-5% 1/16W
E1TXT	2973916A	10J EH CONNECTOR (L=390)	R035	0110207S	MF 27 OHM +-5% 2W
IC0001	2004691	IC MM1118XS	R037	0700054M	CF 10K OHM +-5% 1/16W
IC5201	2009902	IC SAA5281ZP/E	R038	0700041M	CF 1K OHM +-5% 1/16W
IC5202	CP00241	IC T900580	R050	0150262	VR 2K OHM-B
IC5203	2007951	IC M-BR24C02	R5204	0700027M	CF 100 OHM +-5% 1/16W
L5201	2123781R	PEAKING COIL 100MH	R5205	0700027M	CF 100 OHM +-5% 1/16W
L5202	2123098M	LA AXIAL COIL 4.7MH	R5206	0700027M	CF 100 OHM +-5% 1/16W
L5203	2122956M	LA AXIAL COIL 100MH	R5207	0700033M	CF 270 OHM +-5% 1/16W
Q001	CF00865R	TR 2SA1980 Y/G	R5209	0700027M	CF 100 OHM +-5% 1/16W
Q002	CF00875R	TR 2SC5343 Y/G	R5210	0700047M	CF 3.3K OHM +-5% 1/16W
Q003	2326875R	TR DTC144WS	R5211	0700059M	CF 27K OHM +-5% 1/16W
Q004	CF00875R	TR 2SC5343 Y/G	R5212	0700034M	CF 330 OHM +-5% 1/16W
Q005	CF00875R	TR 2SC5343 Y/G	R5213	0700036M	CF 470 OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
R5214	0700036M	CF 470 OHM +-5% 1/16W			
R5215	0700036M	CF 470 OHM +-5% 1/16W			
R5216	0700036M	CF 470 OHM +-5% 1/16W			
R5222	0700027M	CF 100 OHM +-5% 1/16W			
R5223	0700027M	CF 100 OHM +-5% 1/16W			
R5224	0700041M	CF 1K OHM +-5% 1/16W			
R5225	0700041M	CF 1K OHM +-5% 1/16W			
R5226	0700081M	CF 1M OHM +-5% 1/16W			
R5231	0700046M	CF 2.7K OHM +-5% 1/16W			
R5232	0700049M	CF 4.7K OHM +-5% 1/16W			
R5233	0700049M	CF 4.7K OHM +-5% 1/16W			
R5251	0700036M	CF 470 OHM +-5% 1/16W			
R5252	0700042M	CF 1.2K OHM +-5% 1/16W			
R5253	0700054	CF 10K OHM +-5% 1/16W			
R5254	0700062	CF 39K OHM +-5% 1/16W			
R5255	0700054	CF 10K OHM +-5% 1/16W			
X5201	BP00031	X'TALOSX27X1527MHZ			
X5202	2940241	CRYSTAL 6 MHZ			
ZD001	2339837M	ZD HZS5C1			

HITACHI

HITACHI CONSUMER PRODUCTS(S) Pte. Ltd
TV DESIGN

REF.NO: SP- 0024	DATE:26 OCT 99

HCPS 27.OCT.1999 HARASAWA
HCPS 27. OCT. 1999
TVD 27. OCT. 1999 HIRONO

TECHNICAL BULLETIEN

ITEM: CTV (S6-2/V1-2/V1-F CHASSIS)

MODEL(DESTINATION): C2980FS-021/022, C29-F100-021, C3380FS-021/022

SUBJECT: ステレオ放送受信時ブツブツ音発生

上記機種において、特殊条件の信号を受信した場合(ステレオ放送信号の周波数偏移が大きい、S1／S2比が22dB以上)、ステレオ放送を受信していると極めて稀にブツブツ音が発生する事があります。
また、モノラル放送を受信している時においても音が大きくなったり，ジャー音が発生することもあります。
その様な現象が現われる時は、下記に示してある改善内容(1～3)を実施してください。

改善内容

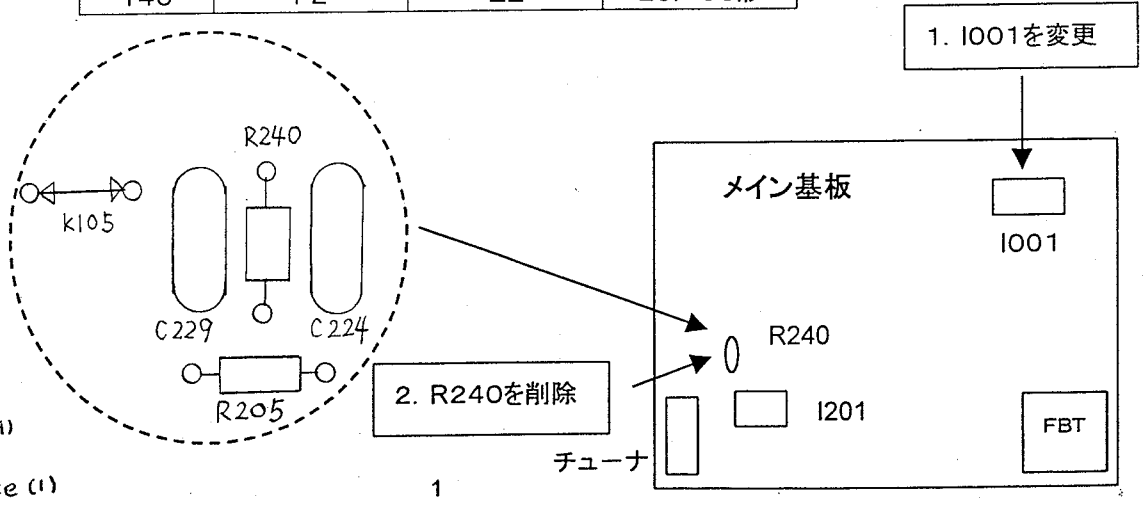
1. I001を下記の通り変更する。

サイズ	機種名	変更前	変更後
29	C2980FS	CP04804U	CP00241A
	C29-F100	CP04804U	CP00241A
33	C3380FS	CP03807U	CP04361A

2. R240を削除する。

3. サービスデータの変更　　下記の通りに変更してください。(変更のやり方は、サービスマニュアルの7ページに記載してありますので参照してください。)

データNO.	変更前データ	変更後データ	対象
139	0F	15	29形
	10	15	33形
140	F2	EE	29／33形



Distribute:TV QA (1)
BC (1)
Ⓣservice (1)